

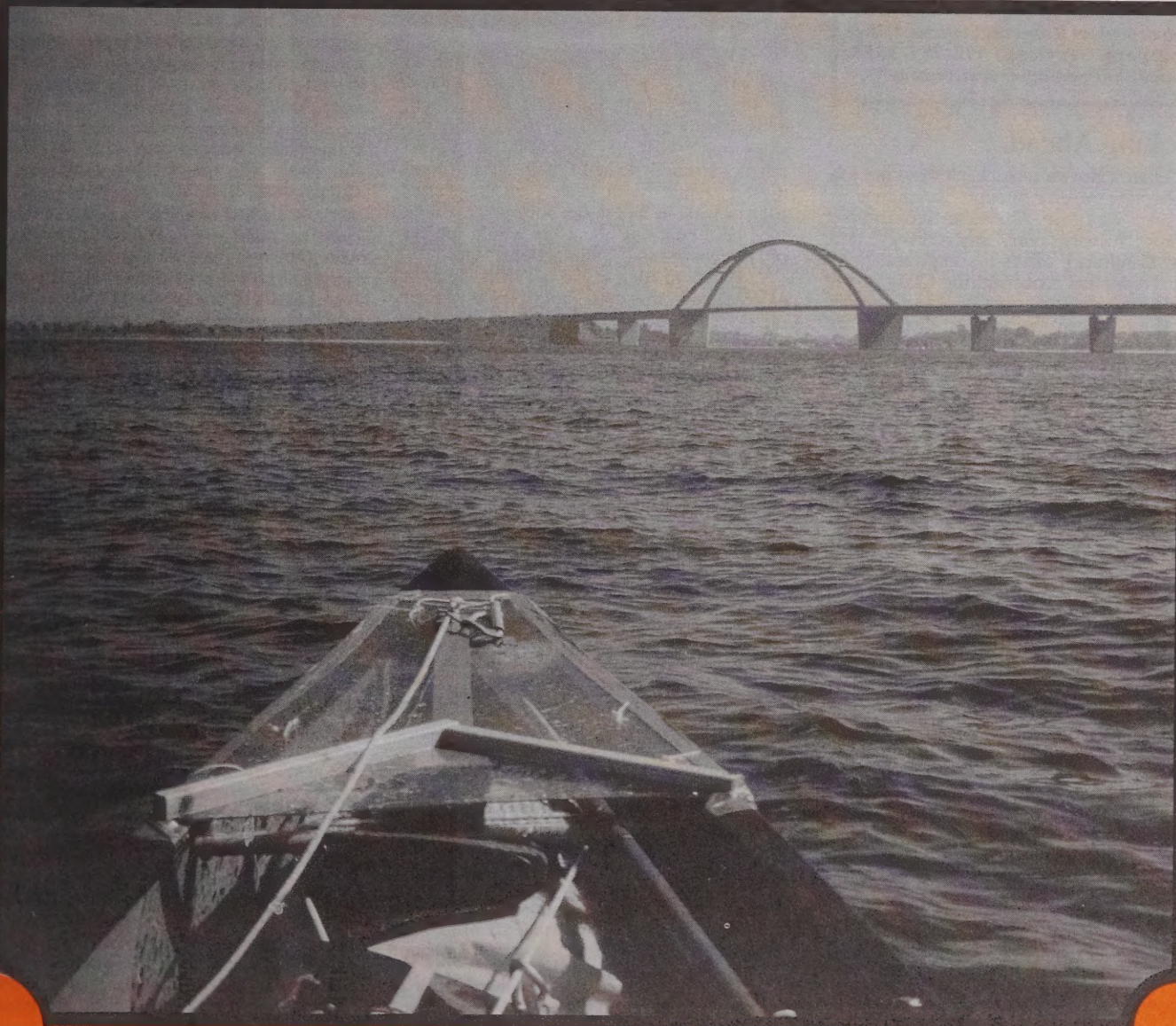
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messing about in **BOATS**

Volume 20 - Number 17

January 15, 2003

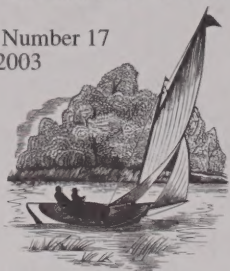


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Special Features This Issue
"Busman's Holiday" - "Old Boats"
"Junior Boatbuilders" - "Designing Swabbie"

messing about in BOATS

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January 15, 2003



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Commentary...

Bob Hicks, Editor



It's the season again for review copies of new books to show up here unannounced, and so my curiosity was only mildly piqued as I opened up the latest packet to arrive from McGraw Hill. When the title came into view I thought, "Oh, no, not another tall ship book!" However, a quick read of the dust jacket blurbs, along with the title, got it past my lack of interest in tall ships. *Tall Ships Down* is about "the last voyages of the *Pamir*, *Albatross*, *Marques*, *Pride of Baltimore*, and *Maria Asumpta*," written by Daniel S. Parrott, captain of the *Pride of Baltimore II*. Well, maybe this would be more interesting than I initially assumed.

It was. I soon got into it and did it up in two sittings (didn't even fall asleep as usual at 9pm), so caught up was I by Parrott's exhaustively detailed discussion of why tall ships aren't what they used to be and so bad things happen to some of them. And I found myself saying, "yeah, yeah, yeah" page after page as what he had to say bolstered my own long-held opinions about the whole subject of "re-enactments," "replications," etc.

I'll try to stick to the tall ship situation as revealed in this book, but first I'll just get off my chest once again my view that it is absolutely impossible for any of us today to really experience how it once was in any bygone human activity as we are products of our own time and culture, with its all-encompassing safety nets waiting to save us from our folly, something the real world of those bygone times did not have.

The "crewman" of a tall ship of the clipper ship era (prior and post as well) did not arrive at the dock in a BMW sedan carrying with him his cell phone, and board a vessel full of modern electronic communication and navigation equipment with a powerful diesel iron wind below decks just in case.

So, on to the book. It is not an indictment of the tall ship fad, the author makes his living skippering the *Pride of Baltimore II*, which was built to replace its earlier version which went down suddenly at sea in 1986 without any Mayday. Despite all twelve crew members being on deck when a sudden squall put the *Pride of Baltimore* over on her beam ends and downflooded her through an open

main hatch, four died, including the skipper. This book is rather an analysis of how today's tall ship fever falls short of what it can and should be.

The *Pamir*, one of the last of the German Flying P line of cargo-carrying sailing ships which operated mainly in the grain trade between Europe, Australia, and South America, was a huge 316', 4,591 ton steel vessel carrying grain and cadets when she foundered at sea on the edges of a hurricane in 1957, sinking so fast that she took 80 of the 86 on board with her. How could a ship that had made dozens of passages around Cape Horn in her earlier life on tight schedules as a commercially sailed cargo vessel lose it so suddenly in lesser sea conditions?

Well, the answers to this, and to the other four vessels' sudden ends, are explained in this book. The major reasons are that the skippers and crews did not know what they were doing and the vessels were no longer being operated as they were designed to, nor were they equipped as they once were. The German firm that owned the *Pamir* before she was sold off when she was no longer profitable, refused to take part in amateur sail training efforts involving the ship, as they felt that qualified experienced skippers and crews were no longer available.

Re-enactments by amateurs who aspired to do what those real tall ship seafarers once did, without spending lifetimes learning how, brought on these, and a number of other similar sinkings. And they re-enacted in vessels which were operated differently than they had been designed to, so modified to meet today's many demands for crew comforts, safety, etc., that they no longer had their original hydrodynamic characteristics.

So, you gotta read this book if you find the great age of sail fascinating and are caught up in today's tall ship fever. The author does not indict the concept of what the tall ship movement is attempting to preserve, but points out how far from reality these efforts are. We weren't there when it was the way of life at sea and need to get real about how we choose to re-enact those times today.

Tall Ships Down, Daniel S. Parrott, McGraw Hill, ISBN 0-08-139092-8, \$24.95.

Looking Ahead...

Sharon Brown looks back from her job running the Mystic Seaport Boathouse in "Mystic Seaport Museum Boathouse Update...Fifteen Year Anniversary;" and Mark Kondracky offers his impressions of "The Traditional Boathandling Class at the Mystic Seaport Boathouse."

Hugh Hagan has another short tale of minor adventure on the Chesapeake in "Space Shuttle;" Mississippi Bob Brown continues his tale of a delivery trip in "Busman's Holiday;" and also gives us the inside skinny on "Line Handling the Way the Big Boys Do It;" Hugh Ware continues his series on professional messing about in really big boats in "Beyond the Horizon;" Reinhard Zollitsch continues his narrative about his coastal canoeing adventure, "Paddling Solo Along the Baltic Coast of Germany;" and Tom Lathrop brings us a prequel to his earlier tale of cruising Baja in a small skiff in "Voyages of the *Loon*;" and supplements it with Graham Byrnes' "Bay River Skiff Designer's Notes."

Greg Gundtisch and the lovely Naomi travel to Rhode Island and learn about "Herreshoff's Little Known Designs" at the Herreshoff Museum; George Jacobs discovers on a sailing kayak outing something about jet fighters in "Hey, They Both Have Airfoils!;" Marshall Katz suggests "Building a Boat for Someone Else with Their Help;" and Robb White weighs in with "Anchors."

From a 1960s issue of the Amateur Yacht Research Society's journal, John Morwood muses on "The Non-Acceptance of Multihulls;" small boat designer John Welsford continues his new series "From the Drawing Board" discussing "Sedition;" and Phil Bolger & Friends will have something for us as usual.

On the Cover...

Long distance paddler Reinhard Zollitsch take time along his way to shoot some evocative photos of what it's like where he's paddling, his Baltic adventure continues on in this issue.

Plywood Phooey???

Dear Mr. Robb White:

I have enjoyed your writings for some time. You are a "colorful" character and an interesting craftsman. That you are opinionated in your writing goes without saying. That makes it interesting, up to a point. Your recent article; "Plywood Phooey" (Vol. 20, No. 14, Dec 1, 2002) goes beyond what is acceptable to me and I have to comment.

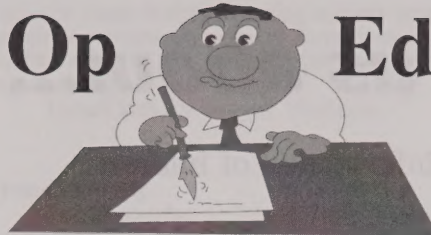
The controversy over plywood as a boat building material has been going on since the first plywood boat was launched. I don't wish to prolong it and I hope that any reasonably well informed person will ignore most of your overstatements and misrepresentations in that article as just your style of being "colorful". However, I am concerned about the people new to boatbuilding who read this great little periodical to gather information and opinions. You are misleading them.

Your "colorful" statements are just too overstated to be credible or are outright false. You state; "Plywood ain't worth a damn for boats. Even the best plywood is worthless as a boatbuilding material. Even if it is fiberglassed on both sides with epoxy it still (is) inferior to any real wood that is treated the same way." This is simply not true and is so blatantly overstated as to be a worthless argument. There are many fine plywood boats and many poor "real wood" boats (even built the same way, in fact, I argue that epoxy sealing any dimensional lumber, anything over about 5/16", is asking for real trouble down the road).

You ask; "How many plywood boats do you know of that are more than twenty years old and have been used a lot?" Actually, I know of quite a few. I have in my yard here a plywood Blue Jay built in 1963 that has been on a mooring every summer (that's 39 years). The solid white oak chines rotted out in places amidsthips some years back and were fixed and the solid oak centerboard logs are getting questionably but the plywood is great! The deck is varnished mahogany plywood, and yes it has the look of rotary cut veneer. Solid mahogany would look better (and be heavier, more expensive and may not hold up as long as 39 years...) but I propose that varnished plywood still looks better than 39 year old oxidized fiberglass gelcoat. And there are no "mushrooms" growing out of the plywood end grain.

In comparison, stored right next to the Blue Jay is a traditional solid wood plank-on-frame Beetle Cat that was built about the same time (late '50s early '60s). It is in need of a rebuild and cannot be used. The solid wood frames have deteriorated, the solid cedar planking has been split in many places by the rusted fastenings, and the solid wood stem and keel are questionable.

You state that; "Even the best plywood boat like the old Lyman... had better stay inside". Hmmm, I had a 1958 Pen Yan up until a short while ago and that stayed outside (properly maintained and stored of course) that won a prize (in its class) at an antique boat show some years back. There were no "mushrooms" growing out of the plywood end grain either. A friend has a lapstrake plywood White, also 1958, that stays on a



mooring in saltwater every year and gets much use. It wasn't in the water the last couple of years because some of the solid oak ribs and a section of the solid oak keel are deteriorated and need replacement. The plywood is great after 44 years. There are no "mushrooms" growing out of the plywood end grain on this boat either.

The "six problems" you mention that condemn plywood are all partly true, but completely overstated and sensationalized. Every material has its limitations and disadvantages. Would you like me to list those of the solid wood/epoxy method that you use? The "problems" with plywood can be compensated for in many acceptable ways. You are also comparing plywood to the capabilities of other materials and that is not fair. Yes, a plywood boat "looks like a plywood boat" and there are shape limitations to it. That is an acceptable limitation. Every boat design, every material and every building technique is a compromise. Your comment that "the only excuse for plywood is building a flat panel boat..." There are some wonderful looking "flat panel boats" out there.

Plywood does not appeal to everyone and the finest yachts are not built with it. But that does not make it useless. On page ten (lower left photo) of that same issue that your article is in is a photo of a Little Dubber kayak made out of the lowest of the low, cheap doorskin plywood. That boat, and probably hundreds of others, have been built by inexperienced first time builders, even children, and those builders have gained the huge satisfaction of building their own boat, and have had endless hours of fun paddling them around. Sure, these boats may not compare to a mahogany Riva, but I suspect the happy owners of these boats really don't care. Maybe this little boat will not last 20 years, but for the amount of money invested the return in accomplishment and fun of use is well worthwhile. If that builder had waited until he/she had the skills, equipment and money to build in the solid wood you infer is the only real way, they probably would never have the great experience of building their own boat. Hats off to all those who have built door skin plywood Dubbers!

Plywood is not the perfect boatbuilding material, but neither is solid mahogany, juniper, oak, teak, aluminum, fiberglass, steel or ferro cement. When someone invents a material that looks as good as Honduras mahogany, is completely waterproof, sun proof, and rot proof, can be worked with a butter knife to any shape by even a child but is as strong as titanium, weighs 5oz per cubic foot, costs 10 cents a board foot, does not use limited natural resources and is completely non toxic to work with, THEN you can condemn plywood. Until then, be careful that your "colorful" writing doesn't become too dark.

I suspect that some of your bad experiences with plywood may come out of the region you are in. Up here in New England the weather is nasty but probably kinder to wood than hot, humid Georgia. Sure, any plywood boat left outside, uncovered, and not well painted in hot humid southern weather is bound to grow mushrooms, but I suspect that solid wood boats treated the same way there will do the same. There are more wooden boats in Maine than in Florida for a reason. Do not condemn all plywood boats everywhere for a regional difficulty.

For the record, I am an accredited marine surveyor and have been surveying boats of all materials and of all ages for many years (during a lifetime of boatbuilding and repair) and I do not see much difference in the longevity of production built solid wood verses plywood boats, neither are great for longevity, but neither were they built for that. They were built for certain market at a price. A poorly built solid wood boat of improperly seasoned wood, or a boat not properly maintained will disappear in very short order. A well built plywood boat that is well maintained will last as long as any other material.

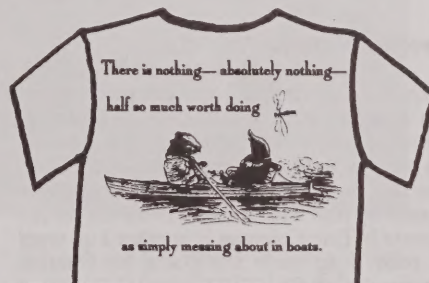
Peter Hunt, Norton, MA

Editor Comments: Peter is also the designer of that Little Dubber kayak he mentions.

Plywood Phooey 2???

Something in Robb White's article in the December 1 issue tells me he doesn't care much for plywood. It does strike me, however, that an awful lot of Chris Craft Cavaliers remain afloat and in use which are all plywood construction. Many Chris Craft Sea Skiffs, also made of plywood strakes, are still plying today's waters, which suggests to me that, bad as plywood might be, it is still not all THAT bad!

Wilson Wright, Executive Director, Chris Craft Antique Boat Club, Inc., Tallahassee, FL.



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Girls Were Fastest

Sorry you were unable to make it to our annual Galvin High School regatta last spring. It was very competitive this year, due to the design of the boats the students built skill was favored over sheer muscle and so the girls set the fastest times.

Jake Darnell, Amesbury, MA



Information of Interest...

Platt's New Website

I know that this won't turn you on, but some readers might be interested. Thanks to my grandson, we have a newly revised website (www.gaboats.com) that has been highly praised by the e heads. It is filled with an added bunch of information such as Q&A, CSR Comments, and a lot more pictures. Included are about a dozen detailed tutorials like "How to Re canvas a Canoe", and plans for "How to Build a No-Pin Centerboard". These plans are free to copy. An example of how much detail is shown is a color chart for the 60 different colors available for MONOKOTE iron-on mylar finish.

Platt Monfort, Geodesic Airlite Boats, Westport, ME

On The Way: Second Edition of *The Complete Folding Kayaker*

I have been asked when a Second Edition of *The Complete Folding Kayaker* would be coming out, a question I usually ducked because I knew it would be a lot of work. While large parts of the original book stand up quite well even eight years since first being printed, there was a mounting amount of new material begging to be published in book form. Now I can now announce that the Second Edition will be out in early Spring of 2003!

In preparing the Second Edition, I had to go thoroughly through the First Edition which sold nearly 15,000 copies. The book encouraged many of them to take the plunge to buy a folding kayak, often in the face of negative comments by paddling shops and other kayakers.

The Second Edition is significantly larger in numbers of pages and illustrations and photos and subjects covered. Beefed up is the section on modifications, for example, as well as parts that advise on maintenance, things to carefully consider in buying a used boat by specific make. There is a whole chapter on assembly. More boat reviews have been added. The camping section has much more specific information on how to pack three different size boats. Over the intervening years I have learned so much more about folding kayaks and what makes them tick.

I feel that the kayaking world has changed vis a vis folding kayaks. While writing that first book, I was a voice crying in the wilderness, but now I am not so alone. Thousands of readers have taken its message to heart, the pro folding kayak arguments, their advantages, the smarter ways to use them. So more people are in a position to counter nonsense that often is said of folding kayaks. Too, the manufacturers have gotten better at putting out models that meet different needs of customers and introduced features that have made their boats easier to deal with.

Ralph Diaz, *Folding Kayaker*, P.O. Box 0754, New York, NY 10024

Opinions...

Bart Patiently Tried

So sorry to learn about Bart Hawthaway. He so patiently tried to teach me to roll. He offered to share his tent with me at a gathering. He said he was a reverse snob and would always keep his old, old tent. He refused to sell me a sea kayak until he got to know me. He finally accepted my check and I got my Bart Hawthaway kayak.

Ed Rogers, S. Orleans, MA

The Simple Pleasures Soothe One's Self

Thanks for a very enjoyable read, every time. I too am in your general age range, and have graduated to simple boating, kayak and canoe after a miss spent youth in faster boats and speedy catamaran sailboats. Although, my canoe is the one my dad bought me when I was 10 years of age, it still is teaching my grandchildren the ways of small boating.

The simple pleasures of being at one with the boat and the water and all its associated flora and fauna are really where it all is to soothe one's self.

Robert G. Torgersen, Nanuet, NY

Spoils You for Rowing Boats

I would like to applaud Bob Awtrey (Opinions...December 1, 2002) for having the guts to challenge the editors of *Yachting* magazine and offer his own opinion as to what type of boat would spoil you for any other rowing boat. For those who missed it, *Yachting* magazine's candidate seems to be the Adirondack guide boat whereas Mr. Awtrey's seems to be a sliding seat racing shell.

I have my own nomination for this honor. Forget about backward facing rowboats like guide boats and racing shells. Give me a boat that I can row facing forward sitting in a big comfortable seat with a backrest and which gives me the power and exercise quality of sliding seat sculling. And I want the option of rowing and steering using just my legs so my hands are free for taking pictures, casting a fishing line, or eating lunch. And I want a boat that can easily handle the wind, waves and current normally found in Narragansett Bay. I want to be able to row it as a single or a double or bring a couple of passengers along.

My newly designed Harbor Cruiser 17 with FrontRower rowing systems does all this and is my candidate for the boat which pretty much spoils you for any other rowing boat. Anyone who would like to try this boat out, please give me a call and I will be happy to set up a demonstration.

I take exception to one implication Mr. Awtrey made. It is not possible for everyone to become confident rowing in a tippy racing shell. Many elderly folks do not have the balance and coordination necessary to learn to handle a rear-facing sculling boat confidently. I have several elderly customers who have purchased sculling boats, taken lessons, and still cannot use them. A more stable boat equipped with a FrontRower forward facing rig is much easier to use and gives you the same quality exercise. For someone who is already familiar with small

Information Needed...

Peep Hen Specs

Is it possible to get some specs on the Peep Hen? I like it but can it take it?

Arthur MacDonald, 57 Endicott Ave., Revere, MA 02151

Reading Material Wanted

I am always looking for books and magazines about small boats to read while I am in prison, but I am on a very tight budget so cannot buy many. I am interested in books on solo ocean trips in small boats of all sorts, one that comes to mind is *Paddling My Own Canoe* by Ann Southerland. *Dinghies for All Waters* by Eric Coleman is another I do want to read. I do have *Sea Quest* by Charles Borden. Anything on how to build kayaks of any type also interests me.

I just read *Revenge of the Whale* by Nathaniel Philbright, a true story of the whale ship *Essex*.

If anyone has books of these type they no longer wish to keep, they can find a good home with me. The way to go about this is to send a list of books you are willing to give to me to Ms. R. Cauntay, Senior Librarian, C.T.F. Central, P.O. Box 686, Soledad, CA 93950-0686, mentioning that I requested this.

Herbert Diaz, Soledad, CA

boat handling, the learning curve is usually minutes rather than months.

There are many rowers in their seventies and eighties and even a few in their nineties who are using FrontRower equipped boats and are doing so with confidence. The rig is easy to use because you face forward and because it lifts, dips, and feathers the oars automatically. You don't even have to use your hands. The Front Rower is just as powerful as a sliding seat rig, but it uses moving pedals for leg power rather than a sliding seat. This minimizes weight shifting and makes it more efficient than sliding seat rowing. It also allows hands free rowing, and reduces strain on your back. More efficient means that you can go faster or further with the same amount of energy expended. This efficiency contributes to spoiling you.

To find out more you can visit my website at www.frontrower.com or give me a call at (401) 247-1482.

Ron Rantilla, Warren, RI



Projects...

Wild & Outlaw Rigs

I think I am catching something from Norm Benedict. I can't keep from dreaming up wild and outlaw rigs. I am very tempted to, instead of working on doors and furniture and making money alongside the next boat, set up to build a whole bronze outboard motor that I dreamed up. It'll have the connecting rod driving a crank directly on the propeller shaft and the cylinder will be the downshaft of the foot and it'll be powered by steam from a tiny boiler sitting loose in the boat. The steam and fuel for the boiler will be propane and the piston will be double acting.

Well it will be double acting in two ways. First, one side of the piston will get pressurized propane vapor and slowly push down (or up). The exhaust from the other side of the piston will go into a little tube brazed to the foot under the water and the contraction will pull the piston while the expansion pushes it. The condensate will be pumped back to the boiler by a piston pump running off the same eccentric on the crank that works the valve gear. I'll have to make some kind of rig to vary the volume of the condenser with the throttle setting so that the condensate can be regulated to stay almost hot enough to vaporize so as not to waste any heat. It'll have a great, big oversquare wheel. I think it would make an ideal sailboat engine.

Robb White, Thomasville, GA

This Magazine...

Reassuring to Read MAIB

Thanks for *MAIB*, it is my greatest stress reliever and a source of some laughs and useful tips. I never cease to admire the quantity and quality of input from your

readers. I also find it reassuring to know that many Americans are ordinary decent people, unlike some of your high profile warhawk spokespeople.

Lionel Hill, Devonport, Tasmania

Found in Italy

Last September we found a copy of your magazine in an apartment we were renting in Italy. We brought it home so we could order a gift subscription for my brother-in-law.

Walter Crocker left the magazine in Italy and Walton Peabody is going to love it because of him.

Henry and Nancy Peabody, Americus, GA

Keep Sailing Along

Thanks again for putting out one of the most unique magazines anywhere. Where else would I find Robb White and so much more? I hope that all is well and that you and the magazine keep sailing along for many more years.

Phil Joseph, Oxford, OH.

Editor Comments: Just had my annual physical, "excellent health" said the doc. My body isn't paying any attention to the years adding up yet so I'm going to keep pressing on. The magazine is also in good health thanks to all of you who so loyally support it.

Commuter Reading

I always loved your magazine, some of the best reading on my train commute. "Natural Dangers" by Robb White was very delightful, it brought a big smile while I was standing on the train ride home.

Allen Spiro, New York, NY

Affirms the Idea of Small

I saw an article in the *New York Times* this fall about an inventor who had come up with a small PC computer controlled robot tool that could cut wood or aluminum accurate to within 1/64" faster than a hand held tool. His ShopBot costs about \$5,000 and the inventor estimates that there are now about 3,000 in use worldwide in small shops. I don't think I'll buy one of these (I don't even have a computer) but I did like the idea that an inventor would think to target small shops and make a tool designed for them. So often small shops seem to speak a language that is altogether different from the way things are done in more mainstream business and industry.

Your publication, more than any other that comes to mind, understands and affirms the idea of "small" and this is part of what makes it unique.

Boyd Mefferd, Canton, CT

PS: The photo in the November 15 issue, page 9, of the jet skis and the fuel tank on the lowbed is priceless.



Poet's Corner...



'Captain Hummand Longwhistle's
last voyage'
by Mark Steele

From 'Tales of the highly unlikely,
utterly far-fetched and totally untrue'

"Land Ahoy! Oh Boy Oh Boy!" (the model yachstman said to me)
"I've almost sailed by little boat, o'er vast expanse of sea,
an hour or four and she'll kiss the beach,
make landfall as they say,
and foreign folk will stare in awe, at my boat this very day..."

"What cargo have you brought kind Sir,
how many crew on board,
Any lizards, rats or stowaways ?
(questions I ignored).

"I'll tell you Sir, what I've brought with me, apart from two broken dishes,
a crate of imagination, a boyhood dream,
and many festive wishes,
plus this growth of beard and this bottle of water, all from o'er the ocean.

Where to next ? Where the winds will take us, I have not the foggiest notion.
Tomorrow at dawn I'll leave on the tide,
hoist sails and point due West,
but now I'm out of rhyme and it is time,
to wish my friends, the very best.

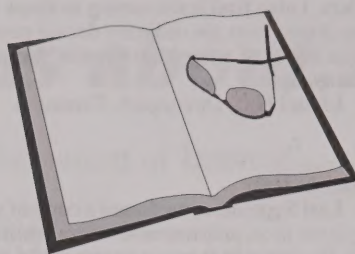
Canoe Rig:

The Essence and the Art Sail Power for Antique and Traditional Canoes

By Todd E. Bradshaw

WoodenBoat Books
Brooklin, Maine - \$35.

Reviewed by Chuck Sutherland



Book Review

Todd E. Bradshaw is a sail maker with a special fondness for wood/canvas and antique sailing canoes. Whether recently built or resurrected from an ancient storage site, Mr. Bradshaw's objective is to bring such boats to life with the kind of sails, rigging, and hardware that made them beautiful many decades ago.

Mr. Bradshaw is the author and illustrator of the elegant canoe sailing book *Canoe Rig: The Essence and the Art: Sail Power for Antique and Traditional Canoes*. Mr. Bradshaw uses beautifully rendered computer graphic artwork to illustrate all aspects from the labeling of the many parts and lines on a sailing canoe and a general discussion of basic sailing skills, to a detailed discussion about how to rig a sailing canoe. This is a comprehensive review of the subject for folks who have had no previous experience with either sailing, or building and operating a sailing canoe.

Folks interested in rig designs may be most inspired by Chapter Three, which illustrates and discusses the widest possible range of sail plans including lateen, gunter, leg o' mutton, gaff cat, batwing, square sails, sloop rigs, gaff sails, fan sails, V-sails and even spinnakers. Mr. Bradshaw does his very best to hook the readers and inspire them to start sewing sails of every description.

Leaving no stone unturned, Chapter Four describes an outrigger sailing canoe and a Pacific proa, and then diagrams and discusses how proas are sailed. They don't tack, they just adjust the position of the sails so that the stern becomes the bow. Then, off they go in the opposite direction.

Having thus obtained the attention of the readers, Mr. Bradshaw gets down to the basics of sail measuring, finding the center of effort of a sail or the combined center of effort if the canoe is rigged with two sails (yaw, ketch, or schooner rigs). Then it's on to the construction of wooden masts and spars. Aluminum and fiberglass masts and spars, although lightweight, effective, and inexpensive, are not allowed on these boats. Next, anchoring a mast step under a mast thwart is diagrammed and discussed.

Leeboards keep your canoe from sliding sideways when the wind blows. A variety of leeboard shapes are presented along with several ways of attaching them to the canoe. Perhaps you would prefer an old time fan centerboard or daggerboard design. He has you covered there, too!

You can steer with a paddle, it's the classic way of steering a sailing canoe, or you can make a rudder. More options are provided for building, mounting, and using rudders to

steer your new canoe (pedals, rope rudder, push pull, tiller bar). So many choices to make; you could spend all winter building the sailing rig for your antique canoe!

You can't just buy a sail off the shelf from some big league sail maker. Your sails must each be tailored to your boat using some design that suits you and gives appropriate unique character to your show stopping swan. Perhaps you have selected a leg o' mutton sail for your handsome steed. Do you want internal or externals battens with that? What about rigging lines for your vang, outhaul, downhaul, halyard, and mainsheet? Did you know that some sails have small roaches, while others have large ones? Don't call Orkin; read the book!

Canoeists inclined to woodworking, who want to install period sailing rigs on their boats, will be greatly inspired by *Canoe Rig*. Those of us who are already practiced canoe sailors may find fault with some aspects of this book.

Mr. Bradshaw recommends stays for rigs having larger sail areas. The only canoe sailors who I know who use stays to support the mast are folks who use jibs with marconi or lateen mainsails. With a properly installed mast thwart and mast step, stays are not necessary on a sailing canoe. The mast thwart/mast step combination described in Chapter Eight of *Canoe Rig* is not sufficiently rugged. Hauling in on the mainsheet of any mainsail when sailing on a beam reach will put substantial force on the mast step that tends to kick the mast step forward. A beam reach likewise puts strong force on the mast step kicking it to the windward side of the canoe. Such forces tend to work the bottom of the hull against the gunwales where the mast thwart joins the gunwale. Because the forces that are tending to deform the hull are large, the mast step and the mast step thwart must be constructed to function as a single, solid unit. This is accomplished by installing diagonal supports that run from the gunwale at the ends of the mast thwart down to the mast step. When beam winds work on the mast, the levering action of the mast then heels the hull as a single unit.

Mr. Bradshaw mentions several times that a fixed rudder may be wrecked by grounding accidentally if it can't flip up upon hitting the bottom. The same argument applies in spades relative to leeboard/daggerboard installations. A leeboard that can't kick up may be seriously damaged if it hits the bottom. Such collisions may even damage your canoe (metal straps torn off the side of the hull, or the daggerboard trunk torn

open in the hull floor). Why are fixed leeboard and daggerboard options offered to the readers (p.145)?

Leeboards are described as important because they keep the canoe from drifting sideways when the wind is on the beam, which is true. It is also true that the leeboard is essential for stability while sailing, even for sailing downwind when the wind is blowing hard.

Mr. Bradshaw's treatment of rudder assemblies, other than rope rudders, is entirely inadequate. He belittles the use of a tiller on a sailing canoe's rudder, which he illustrates with a figure that blatantly misrepresents the way tillers are constructed and used in sailing canoes (p. 173). He subsequently proposes attaching a rope rudder to a cross bar mounted just behind the cockpit. To the crossbar he then attaches a short tiller with a tiller extension attached to it (p. 185). This proposed arrangement suggests that the author has no experience with the construction or use of tillers in sailing canoes.

The tiller in my sailing canoe ends a few inches short of the cockpit at which point it is attached to a short tiller extension. When sailing, I always sit facing the sail with my back to the opposite gunwale. This is true even when running downwind, tiller extension in one hand, mainsheet in the other.

Mr. Bradshaw depicts a cleat on top of the rudder assembly and indicates that a lifting line for the rudder may be tied off there when landing (p. 171-184). A wing nut on the horizontal rudder pin (allows rudder to go up and down) may be loosened or tightened to hold the rudder up or down as necessary, a dangerous idea. The cleat and the nut are to be reached by leaning out over the stern from the cockpit. The reason folks don't use this system is because it doesn't work. Lines that raise or lower the rudder must be brought to the edge of the cockpit where the sailor can adjust them while under way without risking a capsize or loss of control of the boat. Some sailors, as noted by Mr. Bradshaw, use a short piece of shock cord to hold the rudder down and a lift line to raise the rudder when necessary.

Mr. Bradshaw does not discuss capsizing except to say that our sailor may have a long swim pulling his canoe to shore (p.3). No sailor/swimmer is going to pull any capsized sailing canoe anywhere. Without additional bow and stern flotation, our sailor will have a boat with gunwales awash even if he gets it upright. Bailing will be impossible. Sailing canoes equipped with proper bow and stern flotation can easily be rescued by another canoe, sea kayak, Zodiac, or small powerboat having low freeboard gunwales. The rescuers hold the sailing canoe upright and steady, while the sailor bails out the canoe (did he bring a bailing bucket?). If the water is cold, the sailor better be dressed for immersion.

Some sailors are able to get into their boats and sail out of a capsize by using their self bailers to draw out the water while sailing downwind. Nothing is said about self-bailers in *Canoe Rig*. A rescue that requires towing by a powerboat puts all rigging on your boat at risk of serious damage (been there, done that). Power boaters are not sailors and do not understand the damage that can be done in a minute of fast dragging through the water.

Canoe Rig is a book with outstanding graphics that is bursting with attitude. Mr.

Bradshaw states his position clearly on the first page of his prolog (p. X). "For many years, the sport (canoe sailing) has been dominated by racing. Small groups of sailors in very similar boats, with nearly identical rigs, have kept canoe sailing alive, but strict, class racing rules tend to stifle development and creativity." Further he says... "We live in an era when the aspiring canoe sailor has to choose between a very minimal rig that both looks and performs as if no one bothered to design it first, and a modern multicolored rig that sails well but owes its heritage more to a windsurfer than a canoe."

If this last reference refers to the International Sailing Canoes, it has nothing to do with "canoe sailing". Apparently, only certain types of "development and creativity" are acceptable to the author. But these are Mr. Bradshaw's opinions, and I have no problem with them.

Unfortunately, Mr. Bradshaw doesn't stop there. Indeed, the editors at *WoodenBoat* Books didn't insist that he stop there. On the next page he states, "There is no reason that a canoeist wishing to sail should be limited to the unfortunate, industry standard, a 55sf lateen sail with blue and white stripes strung on skinny aluminum spars, just because no one in the canoe industry seems to remember how to make anything else." Many canoe sailors took their first sailing lessons in those Grumman sailing canoes. Denigrating them here does not promote canoe sailing and serves no useful purpose in this book.

On page 71, under the section heading "A Class of Its Own", Mr. Bradshaw describes

the sailing canoes in the American Canoe Association and International Canoe Federation racing classes. His general description of the boats is accurate enough. However, he then says, "For small boats, the rules usually regulate all parts of the sailing rig and where they come from. This means that you can't build or assemble your own rig. You send a check, they send you a rig, and you go sailing."

Mr. Bradshaw's reporting on this topic is absolutely misleading NOT TRUE! In the ACA, 44sf lateen sail class, all sails are the same and are purchased from the ACA at almost no markup over the manufacturer's price. The boats themselves include everything from refurbished antique wood/canvas canoes to wood strippers, cold molded veneer, glass matte, Kevlar hulls, and even some aluminum canoes. Every boat is different and entirely rigged by the owner or by another sailor with appropriate woodworking skills. There is not a single off the shelf boat and rig in the entire "ACA sail" fleet.

The same is true for the 55sf, C class sailors. The sails in this fleet are all different from one another. The class is defined by sail area allowed in competition, which is 55sf (or less). Some sailors enter using only the smaller lateen sail. Others use the lateen with a small jib. One sailor has a small marconi sail plus an 11sf jib. As in the ACA class, all boats are different from one another, and there are no commercially built rigs in the fleet.

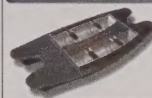
Mr. Bradshaw closes out the last paragraph of the last chapter of his book with the following observation (p. 239), "Sailors, as a group, aren't as relaxed as paddlers.

Many of them sail just to compete, and any time they are on the water they're competing with somebody for something. To someone like you or me, who came out of the paddling community, they can seem obnoxiously aggressive. The best thing we can do is learn the rules, the limitations of our sailing canoes, and how to sail our boats beautifully."

It would have been more fun reading this book if the author (or editors) removed the obnoxious and unnecessary snobbery regarding his chosen old style rigging for sailing canoes. Why *WoodenBoat* Books editors allowed the author, writing under their banner, to repeatedly insult every other, less "authentic", canoe sailor on the water is a mystery to me.

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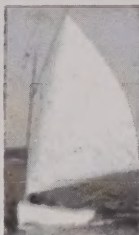
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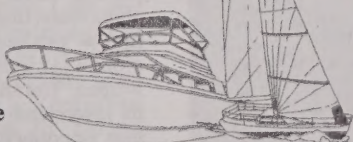
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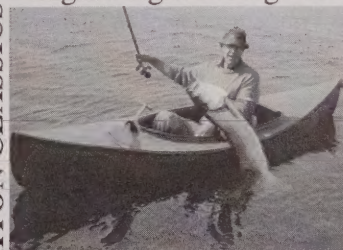
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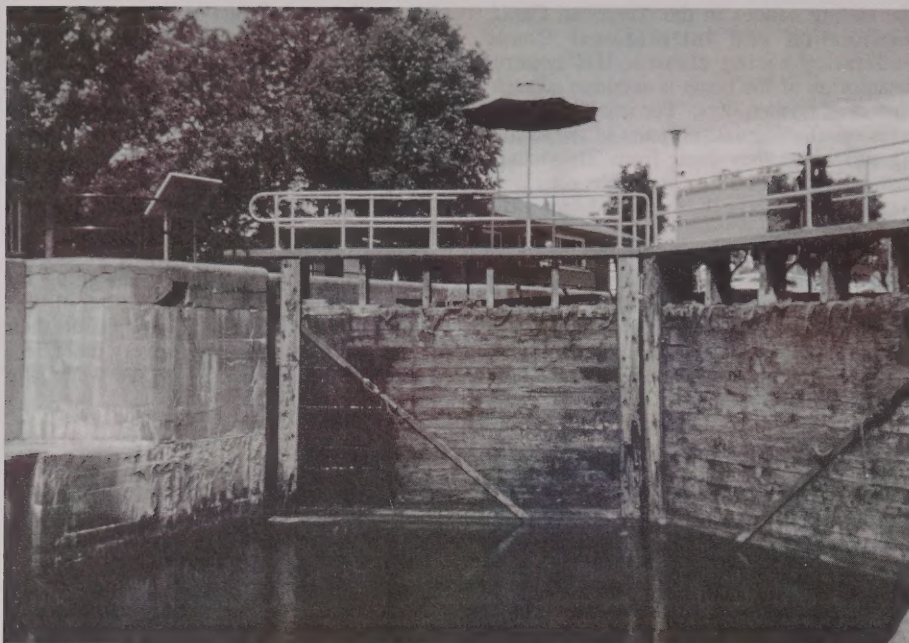
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A typical set of lock gates on the Trent-Severn.



Above: Typical machinery on all the muscle powered locks.

Right: The machinery for opening a valve.



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A Busman's Holiday

By Mississippi Bob

Last August I had the opportunity to cruise through Canada's Trent Severn Waterway. As I am a retired lock and dam operator I am always happy to see how my old job is done elsewhere. I had never heard of this waterway until about five years ago and I was happy to have this chance to travel on it.

Dale, a former employer and friend, bought a 38' Morgan sailboat in Chicago and wanted to move it to the Chesapeake. He asked me if I could help him to deliver the boat. I agreed to help on the section from Georgian Bay to New York City. This part of his trip required lowering the mast for the Trent Severn, then crossing Lake Ontario, the eastern half of the Erie Canal, and raising the mast when we reached the Hudson River. The trip would have to be mostly under power. I expected it to take most of the month of August and it did. We had an agreement ahead of time about the costs that all of my expenses would be paid. I didn't want any big surprises.

I departed Minneapolis on August 4 on a flight to Toronto where I caught a bus north to the town of Parry Sound to the boat. The next morning we got underway early to catch the first bridge opening that led us out the back door of Parry Sound. We sailed and motored all day thru an area called The Thirty Thousand Islands on the east side of Lake Huron's Georgian Bay on the Canadian Shield. There are rocks everywhere. We had to pay close attention to our navigating to miss all the rocks. Any rock that was large enough seemed to have a cottage or two on it.

Late in the afternoon we pulled into Midland Ontario and got a slip at the Bay Port Marina where we had planned to pull down the stick. We also had a starter problem that had to be fixed. Bay Port Marina was a very nicely run place, fortunate because it was into the second day before we had our starter back. We installed it and got the mast down and cradled above the deck and got underway about noon.

We crossed a bay and found the markers leading us into the waterway to the first lock, #45. The locks are numbered from the other end. Severn Sound is about 578' above sea level. Our trip would take us uphill to Balsam Lake at 841' then back down to Lake Ontario at 244', a lot of elevation change spread over 45 locks. Lock 45, a short lift, very small lock, completely muscle powered, was very busy when we arrived on a weekday. I would hate to be there on a Sunday. The lock had the largest crew that we saw anywhere, probably because they are very busy and want to run up and down as fast as possible.

Most of the locks in this waterway have wooden gates, often people powered. They have a wheel mounted on a vertical shaft about waist high which has a 4' lever attached that is pushed by a lock person walking around in circles. Several turns later the gate is open. The shaft that is turned has a gear on its lower end that engages with a gear rack that is connected to the gate. This simple mechanism opens and closes many of the lock gates in the system.

Many of the locks have a very simple fill and dump valve that is nothing more than a steel plate that covers a hole in the timber gate. This plate is raised and lowered with a hand wheel on the top of the gate that has a threaded end. Not all the locks were that simple but a good number were.

Above #45 we came out into a small lake that narrows after a few miles into a fast moving river. A short way above the narrows we came to the Big Chute Marine Railway. We saw tracks leading uphill and out of sight over the hill. At the lower end was what looked like a pair of docks. We were directed by one of the men standing on the dock to come in. We had our lines all ready but they told us to use no lines, just keep running slowly ahead until they told us to shut down the engine. A couple small boats came in behind us and the next thing I knew the whole works was moving uphill. We were suspended on a pair of slings that kept us upright and nearly trim. Up we went past some buildings and over a road then down into another lake.

We passed through two more locks that day and tied off on the upper wall of the Swift Rapids Lock for the night. In the morning we headed east up bound in the Severn River through a very pretty area with lots of rocks and cottages. I was beginning to feel that everyone in Toronto had a cottage in this area. The river turned south and lead into Cguchiching Lake, then thru a narrows and into Lake Simcoe. Simcoe is a large lake, when we entered the north end we couldn't see the shore on the south side. We traveled south for about an hour before the far shore came over the horizon. About this time we cleared some reefs and turned towards the east shore.

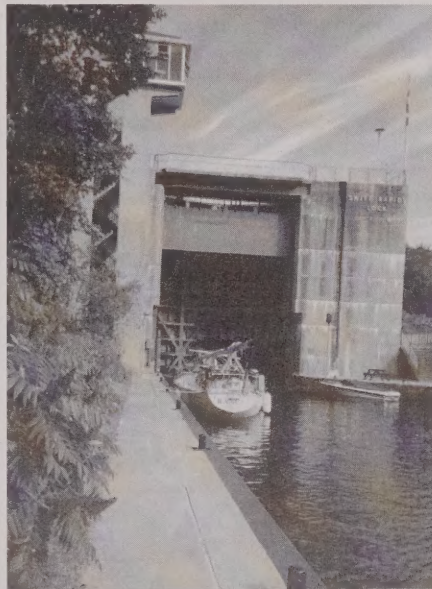
Leaving east out of Simcoe, we travelled in a man-made canal. We locked up thru five old hand operated locks and arrived at the first hydraulic lock and locked through. We stopped for the night on the upper wall of this lock. The Trent Severn has two hydraulic locks, one at Kirkfield and the other at Peterborough. These are like no lock I've seen elsewhere. The are basically two large boxes full of water that are raised or lowered on a hydraulic hoist. The large mass of water in one box is counterbalanced by the other. They weigh the same with or without a boat in them. The hydraulic fluid from the descending hoist rushes into the other and it rises.

At Kirkfield the canal passes out of the lock and over a road. They also have some guard gates there that are shut overnight so that Balsam Lake doesn't accidentally get drained. We left Kirkfield early the next morning heading east into Mitchell and Balsam lakes, probably too early as we had a hard time seeing our markers looking into the morning sun and haze. Balsam Lake is the highest lake in the system. We arrived at Rosedale lock and began our descent to Lake Ontario.

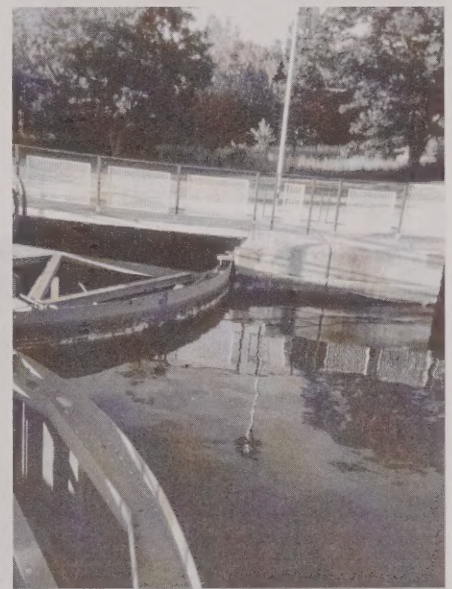
That Friday, the ninth, we traveled down thru Fenton Falls Lock, Sturgeon Lake and thru Bobcaygeon Lock in the morning. The town of Bobcaygeon looked to be very busy, it seemed like a place that I would like to go back to visit again. But being in a hurry, we pushed on as we wanted to get to Peterborough on Saturday. We continued that afternoon down through Pigeon and Buckhorn Lakes, through Buckhorn,



A typical canal section on the western part of the waterway.



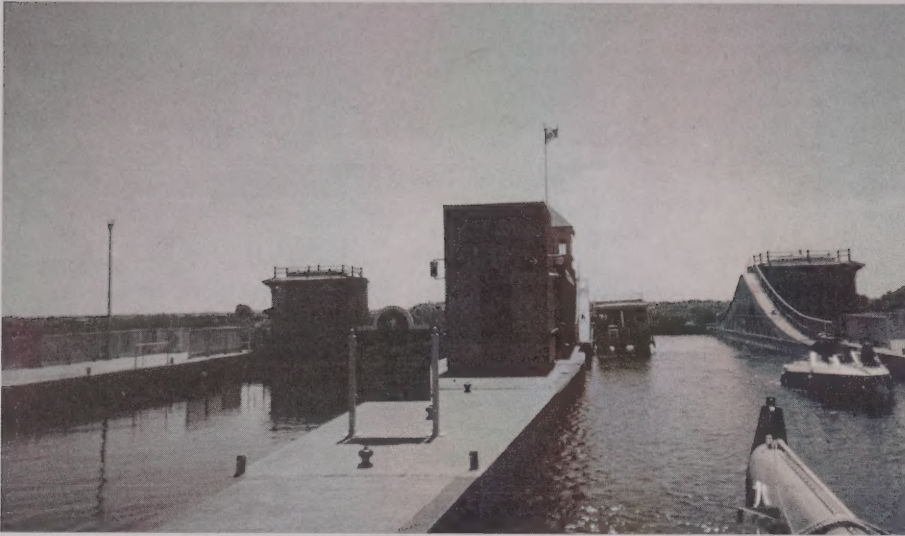
Right: Ranger waiting for an upbound lockage at the Swift Rapids Lock, one of the modern locks.



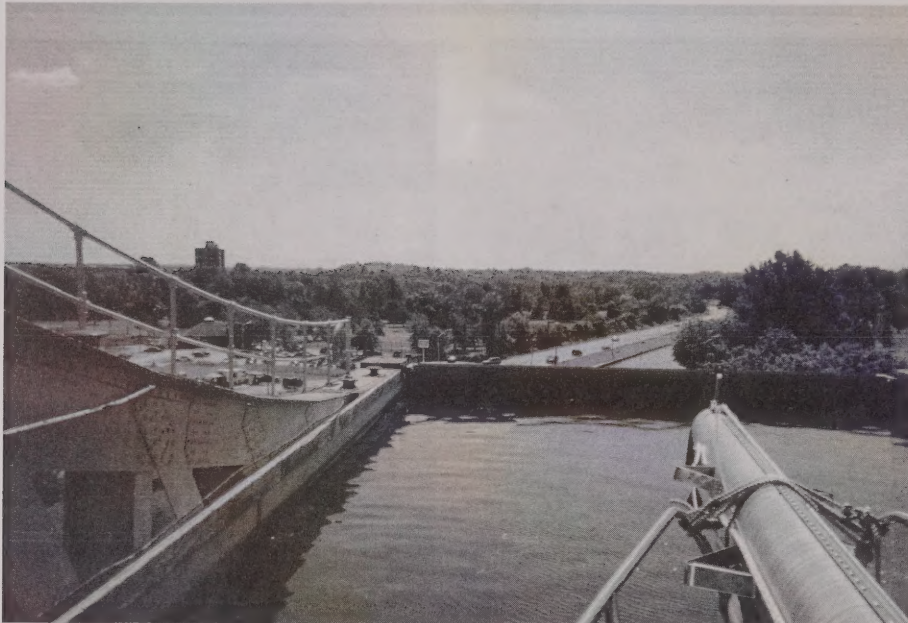
A set of guard gates at Swift Rapids that can be closed to prevent Balsam Lake from draining in event of an accident. This type of gate can be closed with water racing through it. Miter gates cannot do this. Only a lock man would notice.

Going up and over the Big Chute Marine Railway.





The Peterborough Lift Lock from above, in the lock heading down, and looking back upriver afterwards.



Lovesick and Burleigh Falls Locks and the length of Clear Lake to the Young's Point Lock where we spent the night on the lower wall.

Young's Point is a nice small touristy spot. We found a general store got a few groceries and had an ice cream cone. On Saturday the tenth we found several locks close together, one of which just above Peterborough we had a very hard time finding deep enough water to get out with our five feet plus draft. We arrived at the Peterborough Hydraulic Lock about noon and traveled down thru it. One more lock and we were in Little Lake at Peterborough. We found the marina and got a slip for the night.

Having arrived early enough in the day we hiked into town and found the Canoe Museum. Visiting the place was well worth the walk and entrance fee. Being a canoeist I was impressed. When we got back to the boat we found the city park filling with folk that came to see the concert. I'm not into rock music but I did enjoy the food selections, the place had turned into a fair. About sunset the band quit and all the folks headed to the waterfront to see the water show. The show was a group of boats all decked out in blinking lights doe-see-doeing about on Little Lake for a while, followed by a fireworks show. Not bad for a small town. I was told they do this every Saturday a throughout the summer.

On Sunday morning we departed Peterborough early and made one lock down into the Otonabee River where we traveled south for several miles, arriving at Rice Lake, another long lake that took us northeast for several more miles. It was afternoon when we reached the next lock at Hastings. Coincidentally, I had spent most of my career at a Hastings Lock, but on a different river.

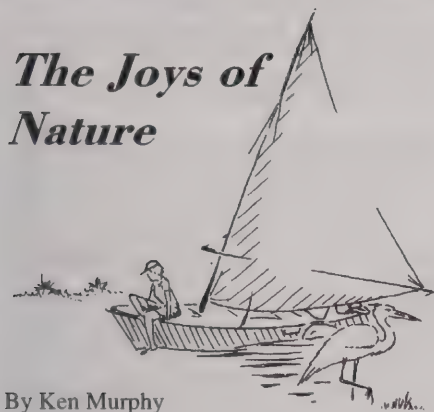
We were finely into the Trent River. There were places where we had trouble finding five feet of water, but fortunately the water was clear enough that we could see the rocks down to about eight feet. Toward evening we arrived at the Healey Falls Flight Locks and locked down. Flight locks are locks that share a common gate. A quarter mile below these locks was another lock where we chose to spend the night. There was a large picnicking area above this lock and we were told it had showers, so we tied up on their upper wall. Our supper was grilled under a shade tree and we got our showers. Gee, two nights in a row.

In the morning when we tried to leave we found that we were floating in a hole that was rimmed with bottom to shallow to get out of. The water had dropped overnight after the upper locks had closed down for the night. Dale had a talk with the lockmaster who called some guys upstream and in a few minutes we were free and got underway.

From Healey Falls to Trenton we really got hammered with locks, dropping fast down to the Lake Ontario level. It was late afternoon when we arrived at the Trenton Marina. Trenton is a fair sized town with an airbase, so I did my laundry and shopped for some munchies for the next few days. Had a nice spaghetti supper back on board then headed for the shower, three days in a row? Sleep was a little hard that night as the waterhont was very busy with young folks from the air base. I was also somewhat apprehensive about crossing Lake Ontario soon.

(To Be Continued)

The Joys of Nature



By Ken Murphy

Of Mice and Men

Each cell of our bodies contains 23 pairs of chromosomes. Each is a packet of compressed and entwined DNA (deoxyribonucleic acid). Every strand of the DNA, the now famous double helix, is a huge natural polymer of repeating nucleotide units, each of which comprises a phosphate group, a sugar (deoxyribose), and a base (either adenine, thiamine, cytosine, or guanine). Every strand thus embodies a code of four characters (A's, T's, C's, and G's), the recipe for the machinery of human life.

As a result of the Human Genome Project started by my old employer, the US Department of Energy, a good draft of the entire coding of this recipe of human life was completed several years back. Thus began a new adventure in biological science. Every month there seems to be another startling announcement that shakes up the biologists, chemists, and computer database analysts who are working in this new field. The December 5, 2002, issue of the *Washington*

Post has such an announcement. On December 4 in conferences in Washington, London, and Rome, DNA researchers unveiled the first draft of the genome of the laboratory mouse and discussed comparisons of the mouse and human genome.

The reason behind doing so much DNA work on the lowly laboratory mouse is that it is the basic tool for medical research, which is a key to further advancement in finding cures for human disease. But this first comparative look at the two genomes suggests a fundamental change in how the DNA machinery works.

Before the Human Genome Project, scientists had thought we had over 100,000 genes that made up the machinery of the human. Each gene is a template for building the proteins that do most of the body's work. However, the project found that we only had about 30,000 genes and that large stretches of DNA in between each gene seemed to be composed of largely useless coding. But the fundamental change in current thought based on the comparative analysis between human and mouse DNA, is that these "useless" stretches of DNA actually contain the instructions on how the body is to use its genes. These instructions determine when, where, the turning off and on, and how long the genes are to be activated.

A boat building equivalent to this new understanding goes something like this: You had been given all the wood, tools, paint, and glue for the construction of a boat, and now, finally, you are given the plans and instructions of how to put the thing together!

This new thinking has excited the scientists. Now they have a whole new area of research to find out how this "instruction book" works. As the "useless" stretches of DNA make up more than half of the genome, they have lots of work ahead of them. Justin Gillis of the *Post* reported that the head of the Institute of Genetic Medicine at John Hopkins University, Aravinda Chakravarti, said, "It's fun to find a whole new set of questions you could spend the rest of your life answering".

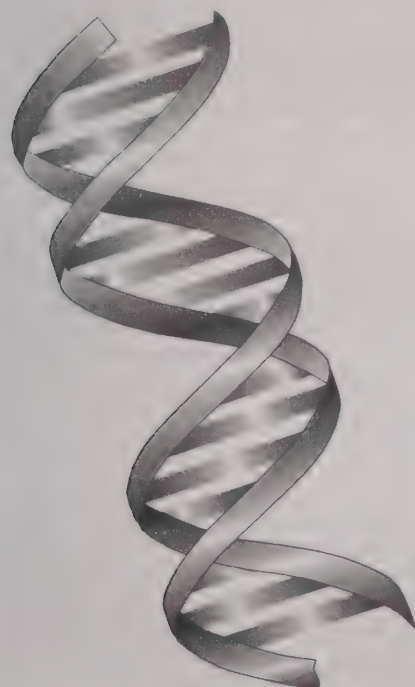
Actually the "instruction book" is only a working hypothesis that is strongly suggested. The fact that 80% of our genes exactly match those of the mouse, and that the other 20% match very closely makes you wonder why we aren't close relatives. Hum, the fact that I do like cheese as much as any

mouse makes me wonder. But with this "instruction book" hypothesis, scientists can now start work on why mice and men are so different, despite like genes. For example, we might have the same brain building genes but the "instruction books" of the mouse and the man may regulate the genes differently resulting in a bigger and hopefully smarter brain in the case of man.

My wife, Virginia, and I just came back from an Elderhostel trip to "The Mountain", a learning center in the mountains of North Carolina. One of the instructors there, Wes Bonds, gave us four two-hour lectures on DNA. Wes had worked on the Human Genome Project for many years. It was during these lectures that I started to realize the fundamental leap that has been made in the biological sciences because of the work in DNA. Mr. Bonds was excited about this new science and the class was caught up in it too.

What got me most excited were the beginnings of deeper understanding of life on earth. That the DNA code of the animals and plants on this earth contain clues of the 3.7 billion year history of the development of life as we know it. It would have been impossible for an 1800s man to accept the fact that we are a brother to the mouse. What an awful thought. But today we cannot ignore the fact. We are brother and sister, not only to the mouse, but also to all living things on earth. Our DNA has proven this beyond a doubt. These are humbling times. Think of this the next time you're afloat in your little boat. Look around and connect with your brethren of water, earth, and sky.

(To contribute your own salty experiences with nature email me at <kgmurphy@erols.com>)



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Pilot going aboard a large car carrier at Chesapeake City.



That pilot boat is larger than you thought.

A typical "small craft" on the C&D.



A Round Trip Through The Chesapeake & Delaware Canal

By Bill Zeitler

The approximately thirteen statute mile long toll free C & D Canal was opened for traffic in 1829. It connects the upper Chesapeake Bay via the Elk River and Back Creek in the west to the Delaware River on the east near Delaware City. A canal trip is not particularly beautiful. It is lined on both sides by rock rip rap with buoys and lights at the entrances. The shipping channel itself is about 35' deep and there are no locks. There are a number of fixed bridges over the canal but with clearances of over 100' small boaters need not be concerned.

The C & D Canal is one of those areas some feel an urge to "conquer". Conquer a thirteen mile canal? Yes... it can be an interesting trip, especially in something like my 5hp, 21' PMT (Poor Man's Trawler) *Amenity*, which was a Bay Hen sailboat and now is my 5hp sharpie cruiser.

Although all the commercial ships coming through the canal have pilots on board they look mighty huge in this somewhat narrow and restricted canal. Although there is no official speed limit in the canal the pilots are well aware of laws regarding wake damage. Nonetheless sometimes one does encounter a challenging wake... not from a commercial vessel but rather from some yoyo with his high powered pleasure cruiser roaring through the close quarter canal at full throttle.

Also of interest to small low powered craft is the fact that the canal's tidal current can on occasions go as high as 6 knots. With me this is a big factor since my maximum speed with only 5hp is 6 knots. Needless to say the way to transit the canal is to know the tide and currents which reverse themselves per tide schedule and make a cruise plan to let yourself get flushed through the canal. I call it "Moon Power".

Hint: Enter the eastern entrance at Delaware River (Reedy Point) high tide and let the ebbing current carry you westward. The canal tidal current floods eastward from the Chesapeake Bay side.

My own trip through the C & D from Wilmington, Delaware on the Delaware river a few miles north of the eastern entrance of the canal was to motor through, stay the night on the western side and catch the reversed tidal current to get flushed through the next morning back to the eastern side and back home. Technically vessels proceeding with the current have right of way (but of course the nautical rule of gross tonnage still applies to us small messing about boaters).

The large Summit North Marina is located about midway through the canal. On the southern side of the western end of the canal is quaint Chesapeake City with a free public dock. It is from Chesapeake City that the pilots go aboard eastbound ships as well as the facility that controls the traffic control lights at both ends of the canal. Transiting the canal under sail is not permitted.

Depending on the time of year, in addition to the commercial traffic, one often sees long distance cruisers (sail and power) using the canal as a way to go north or south using the Chesapeake Bay instead of the not so pleasant Delaware Bay. In the fall one often sees many Canadian flags as the snow birds head south to the Inland Passage to Florida.

Having made my round trip transit I don't think I'll do it again as it was just a bit boring but it was fun and interesting to do it ... once... just because!



Encounter of the large kind.

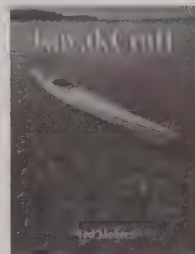


A passing barge.



The pilots' headquarters at Chesapeake City alongside the high bridge.

Amenity, my PMT (Poor Man's Trawler).



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The bridge across Fehmarn Sound to the island of Fehmarn.

I got an early start, made it past the first signal tower, nice and steady and very visible from shore, so that nobody could think I was sneaking up on their military installation. It was less than nine months after Sept. 11, 2001 and everybody was extremely alert and jumpy. I was just approaching the final tower when two guys in an outboard came chasing after me and hailed me with a bullhorn. "You just went through a military restricted zone. That is illegal, verboten @#&%."

"Am I through?" was my counter question, which they dumbfoundedly acknowledged and let me go on my way. I had some other great questions like: "Are we winning the war this time?" or "How many boats have we sunk already? Were those ours or theirs?" But I bit my tongue.

At 9am sharp the shooting commenced, heavy caliber ordinance, out on the bay and along the shore I was going to pass tomorrow. They were at it all day, and spotter planes were dipping low over the water. When my time was up, I found a perfectly secluded place along the beach for the night, but decided to start even earlier tomorrow to get past that other firing range in the little town of Putlos before 9am.

I had again made it to the last signal tower, when suddenly a big commotion started on shore. Cars and trucks were shifting, and people were running down to the shore and hailed me: "He, Sie da, kommen Sie doch mal her!" They obviously wanted me to come ashore. What about my second cup-of-coffee theory? Having nothing to hide, I headed toward shore. When I was close enough for their high powered binoculars to identify my University of Maine cap, I pointed to the side of my canoe where I had put on some stickers which read "German Baltic, Denmark to Poland", with a German and an American flag. Then I pointed straight forward, making it clear I was continuing my course and not coming back or turning around.

One of them must have been an officer, he got the message, sized me up in my lime 16 footer, decided I was no threat to his outfit and waved me through. Minutes later the

Paddling Solo Along The Baltic Coast Of Germany

May/June 2002
Part 2

By Reinhard Zollitsch

booming started, and again lasted until evening. I learned later this was a tank firing range on shore but it also had a target area in the water. Yesterday's restricted zone, I learned, has young recruits shoot all types of guns, including machine guns, out into the open ocean, standing or lying on the high banks, not a pretty picture for a peaceful canoeist passing by.

But this encounter was quickly forgotten when the beautiful arch of the most photographed bridge in Germany came into view, the car and train bridge across the Fehmarn Narrows to the island of Fehmarn. I had never seen this bridge since it was built in 1963, a year after I had left Germany for the US. I took lots of pictures, went through the middle span and back on the island side to my campsite on the Bay of Orth, a perfect jumping off point for my two day circumnavigation of the island.

The afternoon turned very windy, and the entire bay turned white and filled with breakers. The wind did not let up much during the night and early morning, but I was going to try it anyway. I really missed my American NOAA weather reports that morning. Was it getting worse or better, I wanted to know. Was the wind going to shift south, which would be nice, or north, which would make the trip nearly impossible?

When I carried my last bag to the water's edge and turned around, my tent was suddenly gone, totally out of sight. It had ripped out of the ground, stakes and all, and had blown up and over the dike, then tumbled for more than

a hundred yards across an open field until it got caught in a hedgerow of trees. It looked like a large piece of tumbleweed, and I had to laugh. Fortunately the tent survived the excursion without damage, not so my ego, and yes, I would have to whittle new wooden tent pegs.

It was one of the wettest slugfests ever, across to the sandspit two miles away. The white of the ocean became ever whiter around the point. It was very shallow according to my chart, and the waves were breaking for about two miles out. There was no way around it and no way through it at that point. I had to sit it out or cancel my circumnavigation altogether and go back to the bridge and the continent or "Europe", as residents would say. I wanted to take out at the point, but was unmistakably reminded that this was a nature preserve and there was no trespassing on Crooked Tail (Krummsteert).

It took me almost an hour to get beyond the borders of the preserve. I pulled out along the dike to warm up, dry out, pick up my spirits and rethink my predicament.

Two hours later the wind had settled somewhat and I felt warm, dry and fed and was poking my bow back around the same sandspit. I wanted to go around this island real bad, and suddenly noticed a channel between the outer break and the shore break which was doable. I could dance through there in this boat, which proved to be surprisingly seaworthy, forgiving and dry, even running in beam waves. I knew that once I decided to round the point, I was committed for nine miles with a strong onshore wind which would make for a very difficult, hard, and mostly wet and awkward landing.

It worked out fine. I was keenly watching every wave to see where it would break, then sprint or slow down to avoid that part. Adrenaline was kicking in. It was as exciting as a whitewater race, and after 100 successful yards, I even enjoyed the thrill of dancing with breaking waves.

After three hours I rounded the northwest point of the island, and the winds slacked off and came more or less from behind. Whew! My predetermined overnight stop was just past the National Park surrounding the memorial for the sailors lost in the *Niobe* disaster. This German sail training ship with 69 seamen aboard was hit in 1932 by a freakish sudden violent front on a perfect summer day, with all sails flying, hatches open, and sank with all hands. I dipped my cap in memory of those poor sailors, then pitched my tent 100 yards or so beyond the eastern edge of the park in clear view of the major ferry port to Scandinavia, Puttgarden. This ferry follows the path of the north south migrating birds and is therefore known as the Vogelfluglinie.

I felt very accomplished having made it so far and enjoyed my coffee and reading immensely, while watching the huge ferry boats to and from Scandinavia. This would be a good time, I thought, to start re-reading a book we had read out loud on our sailing trip to the Shetlands. It was a Viking story, *Rode Orm* (The Red Dragon) by the Swedish author Frans G. Bengtsson, describing everyday Viking life and their clash with Christianity, as well as their raiding trips ranging as far as Ireland, France, North Africa along the Atlantic, and Russia and the Black Sea in the east. It was written from the Viking

point of view, based on their philosophy, which is very amusing and funny in its irreverence for modern values like respect for life and property and all the modern democratic freedoms. I was fascinated anew by *Rode Orm's* tale and enjoyed myself greatly, here at my closest point to Sweden.

I also had some time to reflect on the point I had just rounded. As a scrawny little kid, I was sent here to a Red Cross Summer Camp, which I remember fondly, especially the food. I also remember trying to reenact Thor Heyerdahl's 1947 crossing of the Pacific Ocean on a reed raft. A friend and I built our individual *Kon Tikis* from the reeds around the island and pushed off from Fehmarn to reach distant lands. Fortunately for us, the reeds soaked up water and lost their buoyancy, so we were forced to abandon our rafts and swim back to shore, 100 yards max.

Next day took me around the eastern half of Fehmarn and back to the mainland. This was easier said than done, and was taxing me to the max. It was fine until the southeastern sharp corner at Staberhuk. Suddenly a stiff 20-25 knot southwest wind with a long fetch greeted me. I was headed back to the bridge, due west, and had to negotiate one breaking wave after the other. I was making minimal progress forward, and was very glad I had a 3' deck over the bow, because at my speed, I could not run away or outmaneuver the breaks, but had to take them as they came. I was drenched in no time, but was working too hard to get cold.

Almost five miles to the nearest harbor or pull out. Keep the boat moving, don't stand still, and keep her off the rocks. Remember, it's a loaner, I told myself, and little by little, made it into Burgstaaken harbor for a break. It was also lunchtime, and why not top off the water tanks at the marina for extra ballast in the bow, so I would not be blown around so much paddling a two man boat solo.

Since my boat had rolled with the punches and stayed basically dry, and since I felt very secure on my tight fitting, kayak like contoured canoe seat, I went out again and joined the slugfest. Suddenly the entire sky in the west blackened. I headed for a small sandy beach, leapt ashore and quickly dragged my boat out of the surf. I hastily put on my Goretex suit and hat, but don't really know why, because I was already wet to the bone. Then the front hit with fierce thunder and lightning. The wind was blowing the wave tops off horizontally, and then pea sized hailstones pelted me into submission. I curled up into a ball, gloved hands over my head, and it stung.

That same day, my sister and her husband were taking a joy ride for tourists on the former lightship *Fehmarn Belt* from Lubeck to Wismar to the east and also saw and experienced this front. The skipper pitied anybody out there today, which made my sister blanch. But I had told her not to call the Coast Guard, no matter what, because I was going to be OK, really!

I watched the menacing corkscrew clouds move past me, and knew there was going to be a brief lull in the action right after the front had moved through. I quickly launched my boat and decided I was not going all the way to the bridge after all, but instead head straight across the Narrows, it was only about a mile. I had barely set up my tent on the other side near Misery Point (Elandsort),



Arriving at lunch break with my sister and her husband at Lenste.



Vacation condos at Hansaland.

when the rains started. Good timing, I thought, while trying to get dry and warm. All my waterproof packs had worked, and I enjoyed and appreciated my dry sleeping bag, wool socks, hat and a hot cup of cocoa.

I did phone and get my sister with her cell phone (which she insisted I take and use for just such an occasion), but the connection failed after my initial brief report, which she, however, clearly got. My satellite phone, on the other hand, worked flawlessly for 11 days, still on its first battery pack.

I had circumnavigated the island of Fehmarn, which most of my relatives and friends in Germany said could not be done, especially in a small open boat like mine. They also threw in some words like "dangerous" and "irresponsible", and I knew, had I not been able to go around it, I would have heard a chorus of "I told you so!" My entire trip would have been overshadowed by statements like, "He had originally thought of going around Fehmarn, but he could not do it." So you see, I HAD to go around the island, I HAD to do Fehmarn. The rest was going to be a piece of cake (don't believe it.)

Below: At 1951 Red Cross Camp at Brodeau with my sister and brother (I'm on the right).



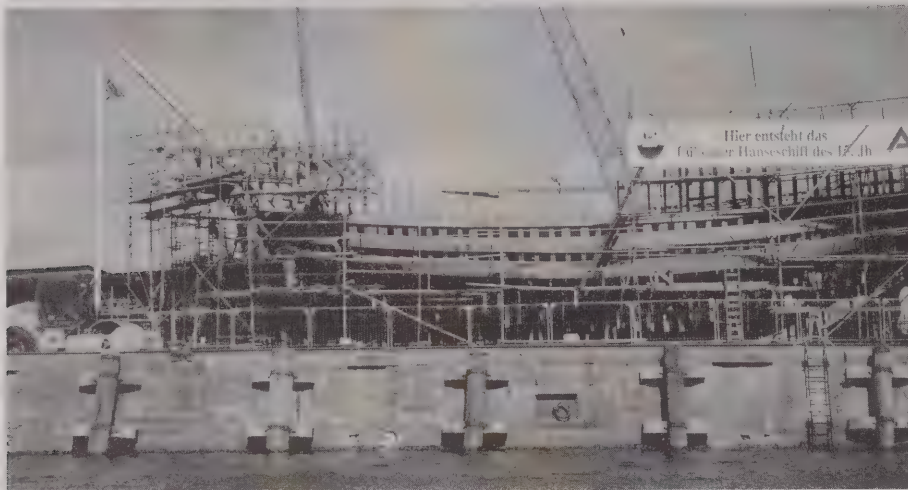


The four masted bark *Passat*, an old "Flying P Liner" at Travemünde/Lubeck.

When the rain let up somewhat, a couple my age stopped by my tent and boat, read the stickers and wanted to talk to me. Did I really come from Denmark and intend to go on to Poland in this boat? They were the first Germans who had stopped by to ask questions. Lots of Germans saw me paddle by, having lunch or saw me all set up like right now, but none had any questions, none had any desire to empathize with the canoeist. All seemed very self absorbed, striding along the beach, the man mostly about four to five steps ahead of his spouse. Only young people walked side by side, holding hands or with an arm around each other. Each living in his/her little world and very anxious or maybe trained not to invade others' lives.

Among friends Germans are very generous, and that includes their emotions, but non friends, strangers, are ignored as if they do not exist. But there are exceptions, and Christa and Heinz from Bielefeld, vacationing here with their sailboat, were such an exception. Strangely enough, many more people in the former communist East Germany were curious and were very eager to talk to me, maybe also because I was from the US.

A replica of a 15th century Hanseatic trading ship under construction.



The old Hoslsten Gate of the Hanseatic city of Lubeck.



Supper tasted great that night: Turkey gumbo in mushroom sauce, but the German bread, which they proudly bake without chemical preservatives, was beginning to look like a little bunny and needed stroking/scraping, or pitching.

If the westerly winds hold, I thought, over my canned fruit dessert, the remaining 60 miles or three days to Lubeck should be easy going. I had rounded the corner and was headed straight south with an often steep shore on my right. This should be fun.

And fun it was, it was easy going. I was paddling almost in a trance off Lenste, when I suddenly heard someone call out my name from shore. Nobody knows me here. What's going on? Then I noticed two figures waving their arms in the air towards me. My sister and her husband had calculated where I might be around lunchtime and decided to surprise me with some tasty German cheese and sausage(wurst) sandwiches. They even had picked a spot with a beach cafe not more than 100 yards from the water, and we had coffee and apfelstrudel for dessert. What a nice touch. Thanks, Ingrid and Reimer, I needed that after yesterday. They weren't checking up on me to see whether I was really fine? Nah!

I finally pulled out on the beach at Brodau, past a huge erratic known locally as Mermaid Rock (Nixenstein). I remember a picture of my brother, sister and me sitting on that rock. It was in 1951, when all three of us were sent to a Red Cross Children's Summer Camp there. A strange feeling overcame me noticing how life goes in circles. Here I was 51 years later, strong, athletic and well nourished with an American passport and several graduate college degrees in my pocket. I'd come a long way, and noticed with appreciation that everything on my way counted and shaped me.

Neustadt Bay sports some of the fanciest spas on the Baltic. There are Haffkrug, Scharbeutz and Timmendorfer Strand. There are grand hotels from the turn of the century and modern hotel towers, which despite their visual intrusion must have spectacular views. And then there is Hansaland, a modern leisure complex (Freizeitbunker) consisting of six huge towers with interconnecting six story apartment complexes. It even has its own amusement park.

All hotels, by the way, have their own swimming beaches, all buoyed off for any boat traffic, extending far out into the Baltic. I was so far out along those beaches, that I could barely make out the people, which was OK with me, because most German beaches are thoroughly emancipated, everybody is strutting their stuff in the buff, mostly the men. There must be a wave of male emancipation sweeping Germany. Maybe it is a form of male protest against an overly restrictive society. Frankly, I do not really know, nor could I get a good answer from Germans. All I know is, though, if they do not watch out, they will develop skin cancer.

The steep shore around the last bend into Travemünde was very pretty but looked as if it was slowly but very surely crumbling into the ocean. I would not pitch my tent here, because in many places large segments had slid onto the beach after the recent rains. It looked like California mudslides.

It was lunch time at Travemünde, the very narrow mouth of the Trave River, 13

miles below the city of Lubeck, the queen city of the Hanseatic League. I grabbed the mooring line of a sailboat, and munched my lunch while admiring the splendid old four masted bark *Passat*, one of the grand Flying P Liners of the Hamburg firm Laeiz, a sister ship to the newly restored *Peking* in New York harbor. Its mast towered over the smaller, still very popular, Folkeboats, but were in turn dwarfed by the new high speed ferries to Sweden and Finland. They were mammoth and took up the entire channel.

A bit later I passed by the ferry terminal and saw those big ferries turn around in a wider part of the river. Right there, a bit upriver from the last ferry dock, was a small beach, no signs, no wildlife preserve, no access from the road, another perfect place for my tent. The boat show that afternoon was stupendous; sailboats and freighters were coming and going, but only very few power boats or launches as they are known around Maine (gas is very expensive in Germany). The big show, however, were the ferries, turning 180 degrees on their own power, with thrusters fore and aft, no tugboats.

Tomorrow was only half a day, 13 miles upriver to the city of Lubeck and our rendezvous at the Holstentorn, the old brick gate, the symbol of this venerable 1,000 year-old city. That would end the first part of my trip, the coastline from Denmark to the former border with East Germany, which used to run right by the *Passat* windjammer, the Baltic coast of the old Bundesrepublik/West Germany.

The Trave was quite beautiful until you come to the Flender shipyard and the industrial port. But I wanted to go up the river to the center of town, the old city, which by the way was built on an island in the Trave for protection, and was walled to boot and had huge gate houses, the Holstentorn being the biggest of them. Lubeck was the hub of the Hanseatic League, a trading union of some 200 cities stretching from England, Holland and Norway to Russia. Its heydays were from about the 12th to the 17th century, and one of the major trading commodities was table salt.

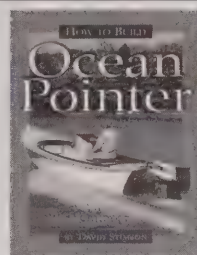
The cities even developed their own type of boats for the trade, the smaller older clinker built kogge, and the later and bigger karavelle. A group of volunteer boat builders was just now building a replica of this boat in the inner harbor. I then made it under a low swing bridge into the Old Timers harbor, where all the old wooden sailboats were moored. Since I was ahead of schedule, I filled my time with writing my trip log, having a snack, taking pictures, poking into other harbor basins, so I would show up at exactly 12 noon under the designated bridge near the Holstentorn.

Reimer was there with roof rack, straps and all. A perfect ending to a very successful first part, 235 miles in ten and a half days, 23.4 miles on average for the day as planned, right on target. No mishap, gear breakage or scrape, not even a blister. Only my bread did not survive the trip. But PB&J on Swedish Knackebred isn't bad either. The boat proved to be extremely seaworthy, stable and forgiving, even in the roughest conditions.

Into the wind with a full load, paddled by only one person, it needs power to move forward though. All my tweaky adjustments worked great, especially the deck over the bow and my foam hip pads. But the most important gear item was my paddle. Thanks, Zaveral, for personally seeing to it that it got to Germany fine and on time.

Now for the big party, the official reason why I came to Germany. But if you promise not to tell my sister, I can't wait to start out again and paddle the second 200 mile stretch along the coast of former East Germany, to the Oder Neible Line, the border with Poland.

(To Be Continued)

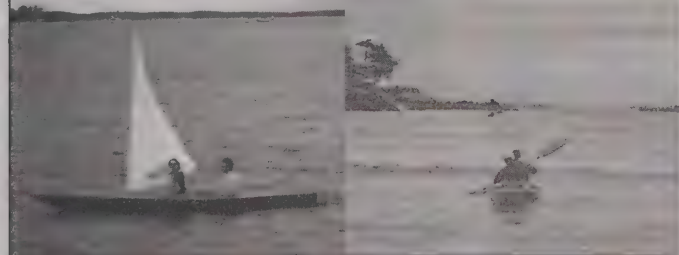


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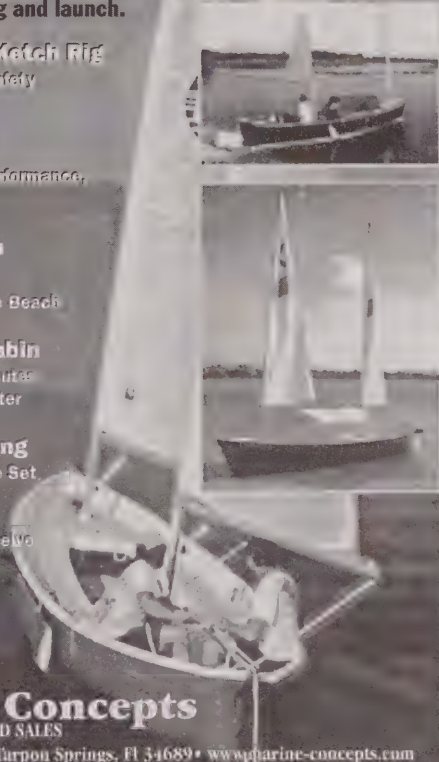
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Prowling along the level shores of meadow, pasture and woodland, I sometimes come upon an old boat that, having outlived its usefulness, has been abandoned by its owner, apparently with as little sentiment and regard for what it has been as that with which a worn out garment is cast aside. When it was hauled ashore for the last time at its accustomed landing by its master, who beached it with no securer fastening, the next spring or autumn flood crept up and dragged it away, to drift forlorn and unguided but by the caprice of wind and current.

Whoever chooses may appropriate it to whatever use he can find for it. Stranded or afloat, lonely, lifeless, it becomes the familiar of all wild creatures, who learn to be as fearless of it as of any other inert bit of driftwood. Muskrats board the water logged derelict, and wild ducks swim as its consort. After blowing hither and yon on many idle voyages bumping its prow on various inhospitable steep shores, and scraping its sides against insulated trees beached far up on the flooded lands, it found a resting place at last among floodwood and driftweeds.

One knows at first sight that the poor craft is no truant, brought to a chance port without help of paddle, oar or sail, but that it came to such haphazard stranding through slow neglect and final abandonment, apparent enough in its worn and faded paint, in its rents and patches that have grown clumsier and more careless year by year, in seams that gape too wide for pitch and oakum to mend. One feels a kind of pity as he contemplates these forsaken wrecks that once played their part in the life of men, and gave their share in some measure to his work or pastime. Each bears some plainly written fragments of its history whereof imagination may fill out the chapters.

Lying broadside to, among the driftwood of which she is a part, and a little below the lighter line of driftweed that hems the green meadow with a band of faded drab, is an ancient scow of primitive pattern. The straight lines of her battered, unpainted sides are not relieved by the slightest curve from bow to stern, from gunwale to bottom; the rigid inch and a half pine plank should not have yielded to such frivolity if her builder had demanded it, which he, of as plain stuff and angular mold, certainly never did.

The flat bottom slants upward at the same angles to the broad, square bow and stern, which can only be distinguished from one another now by a hole for a jackstaff in the short forward deck and various cinder marks upon it, scars received in nocturnal warfare against the fishes. The thwarts are gone, one clumsy rowlock has been wrenched off, the other remains with the stump of its one wooden tholepin, that one held an awkward oar in place by a wooden loop. One of the crosswise bottom boards is gone, and in its place a parallelogram of green herbage its growing, wild grasses and English grasses, with groundnut vines binding them together, and a sprawl of five fingers holding up a humble offering of yellow blossoms. All the gaping seams are calked with spires of grass, and moss is gathering on the heel marks of the owners, who long since made their last voyage in this craft.

In the days of her life she was busy and useful. She assisted in the building of timber rafts and then towed them to the saw mills; voyaged to the grist mills with her owner's

Old Boats

From an old book by
Rowland E. Robinson



grain; cruised along shore, gathering driftwood for his kitchen fire; made trips to the lake for sand. On many another useful voyage she pursued her slow course to the rhythmic thump, creak and splash of oars, and heaved long sighs as her broad prow breasted the waters.

Parties of hay makers took passage on her in droughty seasons, when the upland grass was scant, to mow the rank marsh growth. This they carried on poles and piled in stacks stilted above the autumnal overflow to await hauling by teams in winter. These marsh stacks loomed up on the flat, shorn expanse like mammoth muskrat houses. You may still find among the driftwood the shoes worn smoother by long attrition than their first rude fashioning left them.

The sober craft indulged in occasional play spells, yet carried into them something of the staid and businesslike character of her everyday life. In windless spring nights, when the marshes were flooded and fish swam where the haymakers plodded in September, she cruised over the same ground, her way lighted by a flaring jack, full fed with fat pine. Behind her stood the spearman, his intent face illuminated by the red glare, his weapon in hand ready to spring to the deadly poise. Behold, in shifting light and shadow, sat or stood the paddler or poleman, steadily plying his chosen implement, to whose strokes the heavy boat moved steadily forward.

Frightened water fowl sprang to flight before it, brightly illuminated for an instant, then flashed out like sparks quenched in the darkness. A dazed muskrat floated motionless in the full glare of the torch, then dived with a sudden resounding splash that startled spearman and paddler from their silence. Lighting the broad, glittering water circle, whose edge was gnawed at and bitten by reaching shadows, it crept along the shore, here naked, there fringed with unleaved trees that materialized in gaunt specters out of the mystery of darkness.

Thus the old boat made her wandering voyage and gathered her various fare; then with light quenched went into the darkened homeward way.

In showery summer days, when thrifty housewives said it rained too hard for men to work out of doors, and they could go fishing, the scow was moored, bow and stern, to stakes alongside the channel, where the crew angled in moist discomfort and a dreary monotony of sound, the steady tinkle of raindrops on the black water, the thin bass of the bullfrogs, the purr of rain on distant woods, among which the monosyllabic discourse of the anglers and the splash of their sinkers fell at intervals without jarring the dull

concord, while the sharp metallic clatter of a kingfisher berated them for their misuse of his favorite perches, the fishing stakes.

In halves of broken hay days, during treacherous dog day weather, the scow went trolling for pickerel, the channel's length from the falls to the broad blue bay of the lake, or with seine and elm bark ropes folded and coiled in a great heap on her wide stern, took chief part in seine hauling at the sandbar.

A staunch craft she has been, returning with resounding stroke and uncompromising bow the buffets of Champlain's nowwhite-capped waves. Now all her days of work and pastime are spent. A forlorn vagabond, she is no one's boat, anyone's driftwood. Some farther reaching spring flood than that which stranded her here may set her afloat again, to wallow, gunwale deep, through the troubled waters, and be beached on some other shore, or cast piecemeal, here and there, in unrecognizable fragments. Wherever she voyages she will have no navigators but the idle winds and waves and currents.

In the shade of shore lining trees that annually bathe ankle deep in the spring floods, when the pickerel swim among their bolls and the painted plumage of the wood drake floats double beside their gray reflections, one stumbles upon the half stripped bones of an old trapping skiff. Though of almost as primitive mold, she is of very different pattern from the scow. Short and narrow, sharp at both ends, her sides of three lapped streaks fastened to a few knees of natural crook, she was as cranky as the other was steady, and more heavily burdened with one person than the other with as many as could find room in her.

Yet the trapper, standing upright, a little abaft midships, adroitly humored her cranky tricks, as with his long setting pole he drove her over submerged logs and coaxed her through intricate passages of the flooded wood, or with sturdy axe strokes chopped notches for his traps, or set them as he squatted by log, feed bed and house. Cruising within shot of a muskrat, duck or pickerel, he stooped and snatched his ready gun from the hooks that, with the leather flap that covered the lock, still hold their places.

In memory I follow him as I saw him on his solitary voyage fifty years ago. Now he coasted along a low naked shore, now circumnavigated a low, shaggy island of button bush, now thridded the flooded woods, always alert for promising places to set trap in, now stopping to set one, now to lift one aboard with its drowned victim, and then to reset it. His course was marked by the inconspicuous crotched tally sticks that an eye less practiced than his would scarcely notice.

Now he braves the rapid water of the broad marsh and channel that the season of floods has merged in a lake like expanse. He lands on a farther shore in some warm nook, where the April sunshine comes and the keen April north wind does not. Here he skins his furry cargo, while the expectant crows, watching from safe tree tops, await their repast, and the thronging blackbirds gurgled above him, and the basking frogs croak a lazy chorus around him. Perhaps, as broken and useless as his stranded craft, he yet lingers somewhere on these earthly shores; perhaps has drifted to the unknown coast, from whence no returning voyager brings us tidings.

With the same surroundings, I find the decaying hulk of one of the most primitive of water craft embedded in alluvial mold and bed embowered in royal ferns. Quite at one with the unwrought logs of driftwood that lie around it, is a log canoe. So clumsily made was she, an Indian might have fashioned a neater one with fire and stone tools, though the maker of this had an ax, adze and gouge of steel, in proof whereof their marks still endure. The butt log of a great pine, out of which a sawmill could have sliced material for a whole fleet of small craft, went to the wasteful construction of this one boat. When there was an end of chopping, hewing and gouging, the pile of chips was of greater bulk than the boat.

In spite of her crankiness and her trough like model, it could be said in her praise that she was a solid, seamless shell, needing neither oakum nor pitch to make her water tight, and the wholesome odor of the freshly hewn pine, sweating turpentine at every pore, was a pleasanter smell than that of paint. Her sort were the commonest craft on our waters when I was a boy, yet I do not remember one so new that it had not taken on the weather beaten gray of age, so scarce and precious had suitable trees for making them become.

I recollect their accustomed navigators as men also bearing marks of age and long—service, old men who were uncles to all younger generations. They were not fishing for sport, but engaging in it as a serious business of life, befitting their bent forms and intent faces.

"Ef you want to ketch fish, you must bait your hook with necessity," Uncle Stafford would inform us as we gazed enviously over his gunwale at the fare of great pike lying thick on the canoe bottom. He used a lure composed of pork rind and red flannel, but no doubt necessity sharpened his wits to a proper judgment of the length of line and regulation of the speed of the canoe.

This he paddled so noiselessly that the wary bittern was undisturbed by its passage. In autumn he prowled as silently over the same course, and the canoe, nosing her way along the same watery path, stole upon great flocks of ducks. Then, after a long aim, the ironbound relic of 1812 belched out its palm's breadth of powder, shot and tow, and the roar that shook the shores with slow rebounding echoes. The old gunner shot for the greatest count with the least expenditure of ammunition, and rarely spent half a dozen charges in a day. He was a pot hunter, but an abundant supply of game would have outlasted many generations of his kind. Happy he to depart while it still endured, with no guilt of its extermination on his soul.

Like him, her last voyage ended, his old canoe rests at peace with all things. In springtime the muskrat fearlessly boards her, the wood duck perches on her gunwale, the spawning pike and pickerel bask beside her, and now when the thin autumnal shade blotches her weatherbeaten gray with darker patches, the grouse drums on the moss grown bow, the mink makes his runway along the rotting bottom, and the fox prowls near the shell of crulmbing wood, uncared by the taint of recent human touch. Amid such sylvan solitude, as the tree she was wrought from made its slow growth, the old craft molders to the dust of earth, to live again in the lusty life of other trees.

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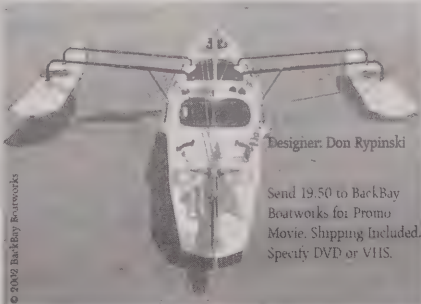
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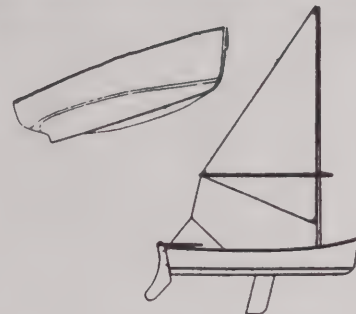
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Fame o' the YARD

BY RM "Chinatown Mike" Schmitt
EPISODE SIX
SPARS

On still-nippy May mornings
Harold & Cousin Viv motored
in the Rooty Poo down to
Hog Island



to fetch tall logs of spruce
for a frame's spars (her
masts, booms, gaffs & sprits)

Hog Island sits near
the mouth of the Essex
River — where the
sandspits of Ipswich &
W. Gloucester beaches
guard estuaries, inlets,
sidestreams, tidal mud-
flats, salt marsh and
forest.

When settlers came from
England in the 1600s,
they knew right away
it would be a great
place to build boats.

Hog Island is part of a
wilderness preservation trust,
so not much has happened
there since back when...

Yer a good man,
John Proctor!



Hollywood used it a few years
ago to make a movie about the
Salem witch hysteria. Bob
Brophy was their star extra.

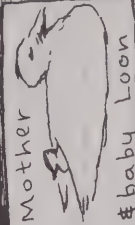
People often ask Harold
now he knows a tree is the
right size for a 52-foot
mast. Does he...



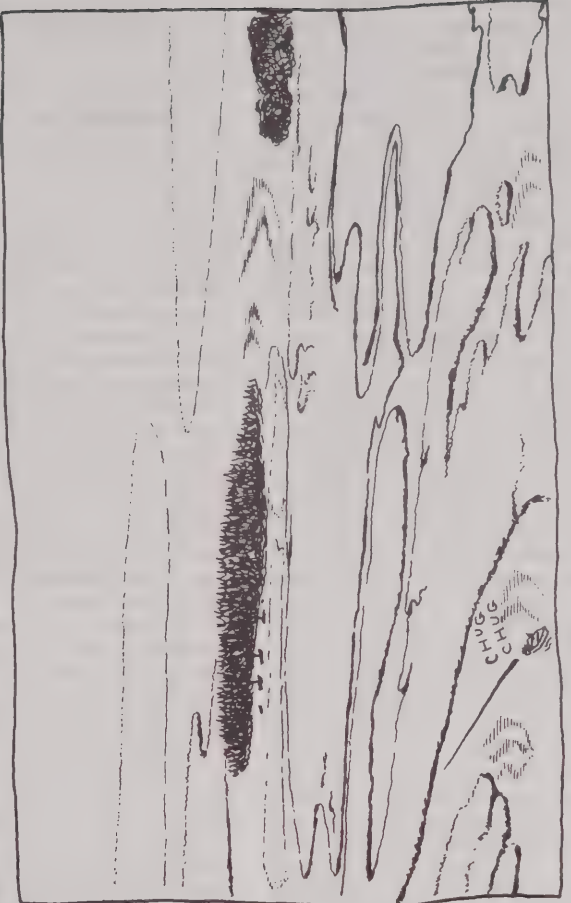
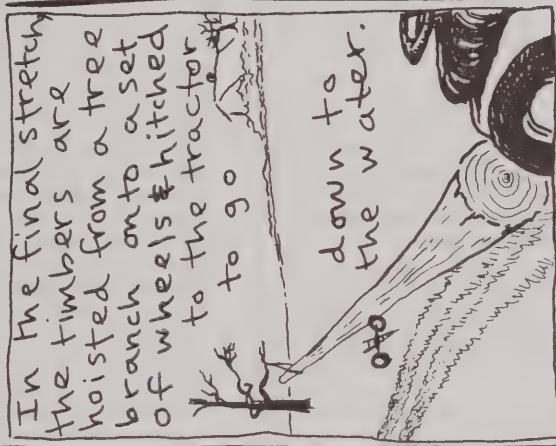
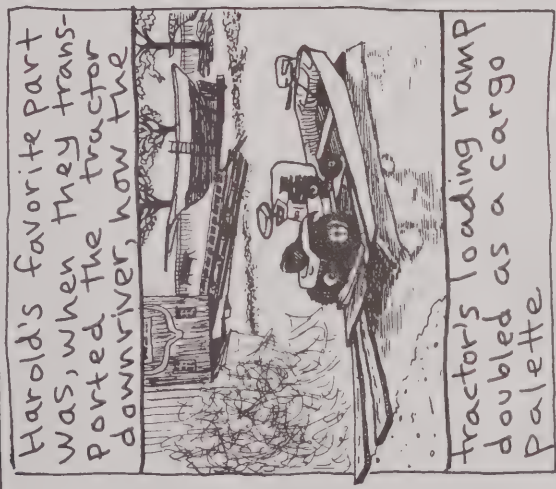
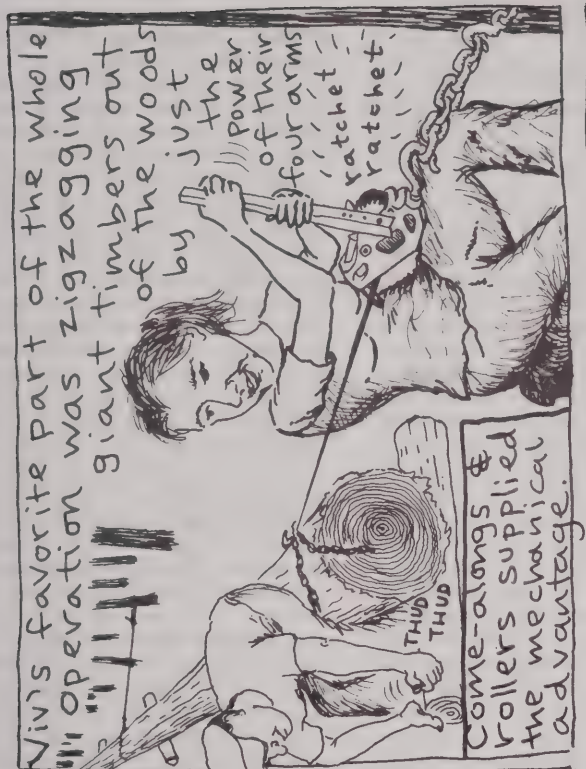
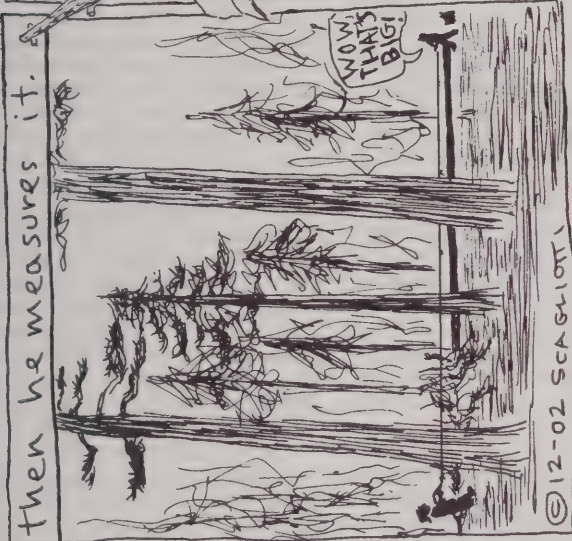
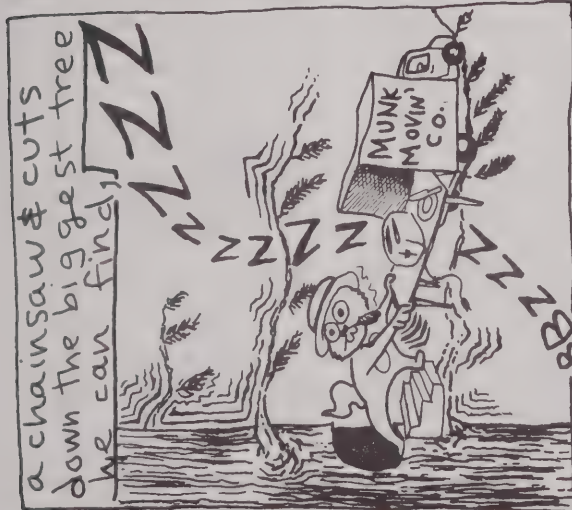
triangulate
measurements?

Employ fancy
equipment?

Bob's the fellow who makes
bird decoys and also carves
lettering & figureheads for
some of Harold's boats.



Actually, he takes...



I don't believe in cheap shots. What I am trying to do is build the best small boat I possibly can... no holds barred. The back yards of boat stores all over this country are littered with the slapped together whims of some contemporary wisdom. I'll be damned if I'll contribute to that pollution. Though I know I'll never stand at the con of my own W class sloop, I do have a pretty neat little fleet, if I do say so myself.

Even though my little boats are pricey, in my opinion they are not overpriced. Not only do I try to do a good job, I try to speed things up every way I can and one of the things I do is to use machinery that I know will make the boatbuilding more efficient. All my boats are one of a-kind, never the same shape in all these years, but if you examine them closely, you will see that they all have parts that look like, if you bent them a little differently, they would interchange between boats. That's because I run them in big lots with machinery.

The first machine used in the process, after my chainsaw and skidder (I do my own logging, saw all my own lumber) is a wonderful thing. It is a Woodmizer band sawmill. Though you don't normally see one of those in a furniture factory, it does give me the lumber that I need, sawn just to suit the boat. It is an accurate, efficient machine... the major decimator of the old growth forests of the third world and the best sawmill for quarter sawing I have ever seen.

All the planks on my lapstrake boats are spired onto double thickness quartersawn (actually "rift" or better... there is some controversy about the classification of lumber that is sawn so that the annual rings are more or less perpendicular to the face of the planks. In the old longleaf pine business, "quarter sawn" meant that no annual ring appeared twice on the same face. "Rift" meant that no annual ring approached any face at less than 45 degrees vertical grain) boards and then re sawn into two identical planks. Because the resulting planks are vertical grained, both of them act the same in the warping process that fits them to the hull of the boat.

Plain sawn lumber, when re sawn, has the face of the board that was nearest the heart on opposite sides so one plank cups toward the inside and the other towards the outside of the boat. As an aside, it is amazing how many people who work with wood get that backwards. As wood shrinks, boards cup toward the outside of the tree, not toward the heart. Even Howard I. Chapelle got it backwards in *Boatbuilding* on page 248. Anyway, if I couldn't get quartersawn lumber, I wouldn't be able to build as good a boat as I do.

I do my resawing on a big (30") bandsaw set up especially to do that. That same bandsaw used to stand in a furniture factory doing that same thing for fifty years so it knows how. Woodmizer makes a re saw rig to go on their sawmills that probably does a better job... well quicker anyway. You can't re saw accurately just using the sawmill because, even though the cut will be perfectly straight, the air dried board won't lie perfectly flat on the ways and the thickness of the pairs will vary.

Woodmizer's resaw attachment power feeds the board between rollers with the blade positioned half way between. That centers the blade directly in the middle and results in

Punching Out

(Adapting furniture factory methods to boatbuilding)

By Robb White

perfect uniformity of the pair even if the overall thickness is variable or the board is warped (as long as it is not cupped but quartersawn lumber never is).

I have two thickness planers just like you see in furniture factories. One is an artifact... big, heavy and powerful (12hp old waist high Nordberg one cylinder diesel 1,200 rpm). I don't use it at all work but I would if I built big boats. The other is a little 12" Rockwell that also stood in a furniture factory and ran all day long. It knows what to do too... cut big chunks from cross grained wood. So, I don't thickness plane my precious quartersawn, re sawn planks on it either. Some of my planking is only 1/8" thick and if you stick something like that into a planer, sometimes, nothing comes out the other end but chips... makes you do the hootchie kootchie dance sort of like you do when a precious model airplane stalls out and dives to the pavement. Those anxious steps are not good for the knees of senior citizens, so I sand my planking to thickness on a furniture factory wide belt sander.

Such a thing as that used to be unaffordable back in the old days. They replaced the wretched drum sanders of yore in factories and you could pick an antique one of those pretty cheap... and soon learn why the previous owner replaced it with a wide belt sander too. I'm not interested in bad machinery, so I'll just talk about wide belt sanders.

The Chinese have brought such as that within reach of the pitifully undercapitalized skiff boat builders of this great nation. The one I have (though not up to the standards of the things you see with two people feeding and two catching... all day and night in a two shift furniture factory) will slowly sand a pair of boat planks exactly the same thickness without tearing up anything at all. I even taper the planks toward the ends with it by winding up and down with the crank as the planks (both at the same time) ease through. Not only does it do a very nice job, but the friction of the sanding heats the planks so they'll be ready for the epoxy/fiberglass sheathing of the next step... and nothing I have found prepares wood to receive epoxy like fresh sanding and heat. I also use the machine to taper the little sticks that I make spars out of. You can get one of them for less than \$1,500 and the belts last a long time if you don't overload them and keep them clean with the little stalk of latex. The cast iron part is fine and so is the main motor, but I finally had to replace the variable speed feed gearmotor with one "Made in USA".

One of the things that I just flat out manufacture are the parts of the rails of my boats. All of them look the same: The top of the sheer strake is sandwiched between a half round "inwale" and a half round outer rub rail. After those are on there, I glue spacer blocks all along the inner rail (and dovetail one onto each frame head). These spacer blocks are

coved on both edges to fit the rails. That way, I can roll them around the inner wale to eliminate having to bevel as the flare of the boat changes to tumblehome.

I run all of them in a long stick on machinery and then saw them apart (then sand them on the edge sander which is coming up soon). The ones in the bow are edged into a tapered stick to let me narrow down the rails up there. The last thing on the rails is a round rod sheer clamp that fits into the inside coves of the spacer blocks. I make all those rail components in three sizes: 1/2", 3/4" and 1". I run plenty of them while I am set up too. I think I have a lifetime supply of halves and ones...sticks and blocks.. but I am afraid I might have to set up and run the most commonly used 3/4" coves and sticks. Boy, I hate to think about it but a man just has to do what he has to do.

I rip the sticks out of clear boards of appropriate thickness on a powerful but small (7-1/2" Matsushita blade from Dave Carnell... nothing else comes close) table saw with a power feed. I finally wore out the old, USA made power feed refugee from a furniture factory, that I had used for years and have one from mainland China now. The parts are interchangeable. A power feed is an essential thing in my operation. You just try to feed a thousand sticks through a table saw or a shaper without one and you'll see what I mean. I believe that a hundred pound, four wheel power feed is the best safety device you can put on a table saw or a shaper too.

There is another furniture factory machine that I could use for that, but it is overkill and I don't want to make a martyr out of a little stick of wood. That superfluous machine is a molder and a more diabolical looking and acting thing I never saw... even worse than a double end tennon. The way a molder works is you stick a rough stick of almost any irregular size, length and shape into the infeed side and a perfectly shaped piece of molding comes out the other... if your setup man was a genius. It takes five or six hours for even a brilliant and experienced setup man like me to change one of those hellish things from one kind of stick to another. It also takes a reckless person to stick a piece of wood into one of them.

I haven't had anything to do with one of them since they invented OSHA but about the only way I can think of to make one safe would be to put it in its own steel building with the operator sticking the wood in through a little hole in the wall. A moulder has about thirty, completely uncovered, belt driven (apt to get slack and quit cutting and create chaos) heads and all sorts of guides, feed rails and chains. Sometimes a stick will hop the track and get crossways in among all that, then it is "Katie bar the door." I have seen more than one molder feeder stride to the time clock and punch out for the last time and sometimes the catcher is right behind. I'll stick with my single head shaper and my power feed, thank you very much.

You know, to shape a stick on both edges, first, you run the first edge with a split fence on either side of the head set up like the beds of a jointer. That'll straighten the stick. Then, when you turn around to run the other edge, you need to rig a "back fence" where the fence is on the other side of the stick from the head. That'll make the molding perfectly uniform in thickness not only

because the finished edge guides the stick, but because the pressure of the cutting holds the wood against the back fence.

I run my half round double sided, set up to leave a little flat, exactly the thickness of the table saw blade on top and bottom to hold the stick straight on the saw table for ripping out the two stalks. That way, I wind up with a true half round and easy feeding stick.

I like to drag my shaper outside in the yard on a lovely fall day so I don't have to rig a vacuum setup to take away the shavings. I have found that it is a lot better to blow them clear of the head with a fan. You could use the exhaust of a banshee vacuum cleaner but a shaper runs sort of quiet and so do the fan and power feed, so no need to disturb any tranquility.

I don't sand a boat after it is put together. I am too old and irritable to bend over like that with some little half assed machine screaming in my ear and blowing dust up my nose. To hell with that. I sand each part before it goes in there... on a furniture factory edge sander. I used to have an old home made junkpile but now I have a store bought (yep... right from the mainland) rig.

You need one with the longest belt you can afford. A long belt runs a lot cooler than a short one and, not only does the cool sandpaper not load up as bad, but it cools the wood so that it doesn't burn.

You can do a hell of a lot more sanding with a stationary 2-1/2 horse machine with some 7' of belt than you can with a little screaming mimi, no matter how much horsepower they claim it has. The big machine will run much cheaper too. I can build two boats per \$15 belt and I am not one to run old worn out sandpaper. There aren't too many of the parts of a boat that can't be sanded (and shaped) just exactly right by using the flat platter and the rubber idler sheave on the end.

An edge sander with a 40 grit belt will run rings around a jointer for straightening and squaring short stuff. I can eyeball bevel the edge of a transom just exactly right, first shot out of the box. Well, I am lying, I sometimes have to take just the least little swipe with one of those hackaw blade style Japanese rasps every now and then as the planking goes up but only if I decide to change something... like, say, the beam of the boat.

An edge sander is the best thing I have found for fitting the bevels for sawn frames

in little skiffs. I can (and I ain't going to lie to you again... straight probity from now on) fit all the grown crook frames and floors into a 20' boat in one day. It makes short work of the nasty edge of laminated outer stem and will fit an inner stem or an axe handle most neatly. It is also very useful for metal work... runs much cooler than a grinder... ain't nothing better than an edge sander for sharpening cabinet scrapers.

One of those dust machines is essential for both it and the wide belt sander... and every other machine in the shop. Mine is small and portable (bet you can't guess where it was made) and I drag it from machine to machine. It runs quiet and sucks hard. I have one of those cardboard drums set up with PVC drain pipe fittings like a centrifuge to separate the heavy stuff, like planer shavings, so I won't have to fool with the bag so much.

The 40 grit paper that I mostly use on my edge sander makes stringy strands of sanding dust that stopped up the little strainer on the intake hole so I had to take it off. Guess what... I laid my eyeglasses down on the table of the edge sander just for a minute so I could see to change the radio station and get rid of Paul Harvey and "ZOOPT". You ought to have heard them when they hit that cheap made, welded steel impeller. I laughed all the way to the Dollar Store. You have to think about those sparks when you grind steel. It won't do to suck too many of them into that bag with all that dust.

I also have one of those air cleaners hanging from the ceiling. I bet you can't guess where it was made... "JDS, USA" (ha, fooled you that time). It runs almost silently. If I had my druthers, I would build boats out in the yard with nothing but hand tools and charge masterpiece money for them and not make any dust at all, but since I can't do that and stick to my main philosophy, I'll be damned if I'll make it any more miserable than I have to by snorting up a cloud of dust every time I have to rummage one of my junkpiles.

But, you know, I never saw such a thing in a furniture factory. Looking down the length of such a place with the lights trying to glow through the dust and all that screaming and those dim figures of tortured people will put you in mind of hell.

The most important furniture factory tool I have doesn't actually contribute a thing to the efficiency of the work or quality of the product. It just keeps me in line with the facts. It is a punch card time clock. Boatbuilding is


not a continuous operation the way I do it. I have to stop to wait for the wood to warp and the sheathing to cure. I have to fool around while the shop heats up before I can epoxify. I build other things in here to help out in the long interim between boat paydays (over a year right now). I have to go messing and fishing and fooling around in the woods... and keep all this junk machinery fixed. I have to play with my grandchildren.

I punch the clock so I can tell how much time I am spending on the other man's boat. You know when you are caught in the grip of a lifetime obsession, it is easy to fool yourself that things are different from the way they actually are. My family has forbidden me from building any more boats for \$1.50 an hour unless they get first dibs.

Sometimes, I'll be in there struggling in a state of advanced frustration and a sort of a haze will descend onto my brain and the next thing I know, I'm just rambling on down the road. I always punch out first though. That's when the haze of confusion lifts. It is one other artifact left over from the days when I worked at furniture factories so I could make a little money to stay in the boatbuilding business a little longer. That same haze... that same punching out... that same rambling on down the road. What joy.

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Building the Swifty 11

By Greg Grundtisch

I had told my lovely bride, the fair Naomi, that I would put aside any more boat building projects and pursue some home maintenance challenges. But when I discovered Shell Boats, and what seemed to be the best boat kits on the market, I couldn't help myself. I ordered the Swifty 11. I gave the task of building to Seamus Donagain. If he could build it, anyone can. And Naomi would not be too upset with me, or so I hoped.

The kit arrived in the summer of 2001, and there it sat until the summer of 2002, when Seamus finally got off his transom, and started building. In a weekend, working about 16 hours, he had the basic hull and seats, centerboard trunk, and decks, fastened, glued and assembled. Another 5 hours of work and the bottom was glassed, skeg attached, bottom sanded and finished. About 4 hours were spent on the spars, centerboard, and rudder.

I helped turn it over and Seamus finished out the kingplank, decks, coaming, and rubrails in another 5 hours. A couple of hours of sanding and the decks, hull, and transom were finished. The hull hunter green with a

yellow stripe to show off the sheer below the rubrail.

Then a big problem. Seamus had miscalculated the width of the stairway going out of the basement. It seems that the hull was 2" wider than he thought, and we could not get it out. Now what? Bob Hicks was informed of the problem, and sent an article from a past issue where a builder solved this same problem by sawing a large hole in the living room floor, and passing the boat through, then replacing the floor to be used again, now rug covered.

Seamus thought this to be a great idea, suggesting hinges to make reuse in the future easier. I had my doubts, but ran the idea past the lovely and talented Naomi. With a desperate look she firmly stated, "NO WHAY!!!!!!"

The solution was the removal of a couple of stair treads and some stair well molding. With a big running shove the hull went through, only a slight gouge in the rubrail. No, the rails could not be removed; they were epoxied and screwed on.

Swifty was finished in about 34 hours work. Shell Boat kits are doubtless the best kits on the market for cost, quality, and looks. And it sails soooooo well. After researching and building comparable kits, I found Shell Boat kits the most complete of any out there. They are the easiest and quickest to build also.

The kit includes all the wood. You need nothing more. The panels came pre-scarfed at full lengths. A simple building form is also included, assembles in two minutes. Screws included. All hardware is included, even oarlock sockets to row the boat if desired. All fasteners are included. All fiberglass/epoxy is included. The holes are pre drilled for you; so you can't make a mistake. It's idiot proof, ask Seamus Donagain. The sail and spars are included, even the mainsheet. What does it need? Literally only paint and water.

I really looked for some negatives so as to not sound like a big advertisement for Shell Boats, but the negatives are few, if any. I had some doubts about the two piece mast, but that changed after I used it. You would never know it was in two pieces. And easier to store in the boat. I also had my doubts about the curved sprit boom, but that turns out to be a great advantage in keeping the sail shape on that tack. I was sure I would want to change to a square spritsail, but when you see how the leg o' mutton sail points, that idea goes out the window.

So, what are the negatives? It doesn't come with paint. I'm guessing Fred will sell you some if you really had to have it. Some parts are of pine where I might have liked a hardwood, that too he may offer to sell you, but you can use the kit pieces for patterns and build your own, add some personal touches. That's the best I can do for the negatives. They are really hard to find.

The complete kit costs me \$900, about 70% less than comparable kit prices. I have no idea why it is so inexpensive. I hope it doesn't change much. You won't find a better deal. I've looked. Shell Boats offer many different sizes and designs, from 6' 16', all priced at what I would call, exceptionally low. You can see for yourself by looking at his website, at www.by.the.sea.com/shellboats. Or, write or phone Shell Boats, 561 Polly Hubbard Rd., St. Albans, VT. 05478, (802) 524 9645.





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Red Devil was built this past summer by my 11 year old son, Tristan. It's a Phil Bolger design, Teal. It took Tristan about 3 months to build it all told. At the beginning my husband helped him quite a bit, but from the installation of chine #2 on he was pretty much on his own. Payson's *Instant Boats* lays on Teal's construction step-by-step, so Tristan was able to follow that as a guide, and his brothers were working on their boat nearby if need arose for spare hands and sage teenage wisdom.

Black Dog was built this past summer also, by 16 year old son Zephyr and 14 year old son Yeshe. It's also a Bolger design, Light Schooner. They were faster at building, Yeshe having built a 16' sailboat in 2001, so it took them only two months from start to finish. They had no adult input except freighting lumber and my reality checks for sailmaking. We all made sails using Polysail materials and method, working together for a couple of long days for both boats. *Black Dog* has a 4.5hp motor that the boys had to rebuild, donated by a neighbor.

Bolger designs on the whole seem to be remarkably accessible for the less experienced builder. My kids are probably not the typical kids, they have built things from early childhood, made their own log cabin to live in. They blacksmith, build electrical and

Junior Boatbuilders

By Isa Delahunt

electronic stuff, make traditional wooden bows and hand made arrows. Regardless of this, Bolger's design pieces fit very well together, provided that they are accurately cut, and the designs seem straightforward, with not too many complicated frills. The plans are clear and well laid out. We did find an error in the schooner plans, the main mast height given is 10" too short. We're making a new one this winter.

Dave Gray's Polysail construction method is a phenomenally easy way to make great sails. I helped Zephyr make a canvas sail for a little dinghy a couple of years ago, but other than that we had no experience at all. With a good book and Dave's method, it was easy. I would recommend sewing one line of stitching as a finishing touch, as Dave suggests, to keep the luff rope where it should be.

One can never have enough boats, of course. Zephyr is about to begin building a Seabird Yawl, a plywood version of Day and Mower's original Seabird from plans by Charles MacGregor. He hopes to finish it so he can live on it while attending college in marine architecture and naval engineering (provided he can get a scholarship to a school near a large body of water, of course!). Yeshe is contemplating a lapstrake small sailboat with long range cruising capability, perhaps Amigo from Glen-L Designs. Tristan wants to build a trimaran, but his brothers want him to build a proa... he's undecided, I guess. Then there's our other son who is 6 and hot to start on a little pram so he can sail too.

We live in a great location for kids and boats. Stuart Island in the San Juan Islands of Washington state has a mile long protected harbor that is a major boating destination in the summer. We are smack dab in the middle of all the San Juan and Gulf Islands and we'll never run out of places to explore. Our island is not accessible by ferry, with no stores or electricity, nothing but great places to ramble around and explore. The year-round population is about 25, in summer there are maybe 75 people here. It's great!

I hope readers find some or all of this interesting. We do have email at school: <isamay@earthlink.net>



Suitability for the Boat's Intended Use

In this trade, as in every other walk of life, some days are better than others. And there are always the types who, after you have expended much energy and sweat to make a day a good one, will come up looking envious and say something like, "oh, aren't you lucky!" Killing them would be much too kind!

But there are ways of reducing the stress, and one of the biggest stressors to a boat designer is the question of how close the design will perform to specification. I mean, when I first started I was pleased if the thing floated right way up, and even more pleased if she sailed bow first but as other people's time and money became a consideration I felt that I needed to do better than that.

So how to do it?

Prediction of performance is not easy in terms of whether or not she will win races, after all there are lots of other designers trying to get their boat to the finish line ahead of you, but "performance" is not necessarily about speed. Performance is better defined as "suitability for the boats intended use". A lightship, designed to sit at anchor all of its life, to survive everything that the elements send its way, and to keep its crew in some sort of liveable comfort will not have speed as a part of its specification. Whereas the fleet of Americas Cuppers currently sailing in Auckland near here (the challenger series starts in 3 about months) are designed to fit the rule and beat the others to the exclusion of all else so you can see that the definition of "performance" would be very different for the two different boats.

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From the Drawing Board

John Welsford
Small Craft Design



Occasional Ramblings From a Small Craft Designer

I design quite a wide range of craft, power, sail and rowing, displacement and planing hulls, rough weather and flat water. It is not possible to build up a serious body of experience on everything, so like most designers I have favourite areas of interest. In my case I am best known for performance cruising sailing dinghies and dayboats, and fixed seat rowing boats. But of late I have been involved in a four man ocean going rowing racer intended for a 1500 mile race, a 13.6 meter (44') very long range displacement launch (for my own use) and a 30' flat out harbour racing yacht among other things. A wide variety of boats needing very different approaches to size, shape and weight. Theories developed for one design type will not work with others, practical structures are a different thing and not so much of a worry but to try and get boat types as diverse as the above to perform appropriately is not that easy.

My approach used to be to look at boats that perform well in the type of use I wanted, and slightly accentuate the features that I thought contributed most to the desired characteristics, then hope for a good day on launching day. Luck? I needed it and must admit to having been pretty lucky most of the time.

Today? Lets use an example. My own project is still in the design stages, I have the shape worked out and most of the layout, but before I even put a pen to paper I knew a lot about the boat.

First, I wrote a performance brief. I established that she was to be a long range motor cruising launch. Range under power, minimum 3000 nautical miles at about 150 miles a day, (6-1/4 knots), fuel consumption to be as low as possible, accommodation to be of a standard that would allow Denny, Brendan and I to live and work on board for several years, a layout that, although suited for cold waters and cooler climates, would be liveable in the tropics as well. We also needed to have enough private corners aboard so we each of us could have a little space when needed. The boat should have a slow roll and pitch period, exceptional directional stability, the ability to carry a heavy load without greatly increasing the fuel consumption, and particularly good access to all services and the engine compartment.

Given all of the above, I went to my library. Robert P Beebe's excellent book *Cruising Under Power* has several sets of tables and graphs which enabled me to establish that a slim hull with a 40' waterline, a Prismatic Coefficient (P/Cf a measure of the fullness of the ends of the boat) of 0.53, a Displacement to Length Ratio of about 280, and a Center of Gravity (C/G) around 48% aft of the stem would give me the performance I needed. Cross checking with tables in Dave Gerr's *The Nature of Boats* confirmed this as did the figures in Jay Benford's *Small Ships*, each book providing a few insights as well as the basic information.

From this information I drew a sketch on graph paper, the spacings of the graphs enabling me to draw to scale freehand. I had the w/l length and an idea of the beam, draft and distribution of weights so I could work out a tentative accommodation layout and styling from this.

With the length and beam, the center of gravity and the displacement (that comes from the waterline length and the desired D/L ratio) plus the P/Cf and the waterplane loading (a figure that gives an idea of the rate that a wave going under the boat will accelerate her vertically, too light and she will shake your teeth out, too heavy and she will be awash half the time) I could calculate the underwater cross sectional area at the maximum beam point, and then a curve of areas to which all of the other cross sections should conform to. This gave me the wetted skin area, frictional and wave making resistance curves, from those came horsepower/speed curves and from that a fuel consumption curve. The prediction was for a consumption of 2.21 liters an hour at 6.8 knots. Right on the button. Whew!

And at this stage I had not drawn anything much other than a couple of freehand sketches plus some odd looking doodles on tracing paper (and no computer other than my integrating planimeter and some of the calculation programs in my hand held.) I could go to a customer and say that yes the design brief was workable and could be achieved.

So, rather than draw a shape and analyse it to see if it will perform as advertised, which is what I used to do for a while, you can see that I am researching a set of statistical factors consistent with the performance envelope that the design brief requires, then draw a shape consistent with those. There is much more than the basics I've mentioned above, roll inertia, same for pitch, directional stability, trim change with roll and on and on and on. But the upshot of all this work is that I can, with reasonable certainty, predict the performance of a new design of a type which I may not have drawn before.

It makes launching days a lot more relaxed.

Coming Next Issue: "Sedition"

(To learn more about John Welsford's designs, contact Chuck Leinweber at *Duckworks Magazine*, 608 Gammenthaler, Harper, TX 78631, online at www.duckworksmagazine.com)

I have, since its inception in 1994, been of the opinion that the Small Wooden Boat Association of Nova Scotia (SWBANS) should have its own club boat. Moreover, I felt that the Association should have a club boat designed and built specifically for it. There is historic precedent for this; for example, William Roue designed several one design class boats for the Royal Nova Scotia Yacht Squadron.

When the SWBANS members were dissuaded from having a common ownership boat by worries about storage, maintenance, and liability issues, I stepped down off my soapbox and let the ambitions for such a project lie fallow for a while. Within a few years the membership had grown in numbers and, having individually and collectively built numerous boats, gained considerable confidence in their boatbuilding skills.

This is in no small part attributable to Gerry Gladwin of Whynot Boats who, with infinite patience and cheerful optimism, has shown our members that with plywood, epoxy, patience, and perseverance they can build elegant and seaworthy small craft. The multitude of Volkskayaks built by SWBANS members are testimony to Gerry's skills as a teacher and each kayak owner's newfound skills.

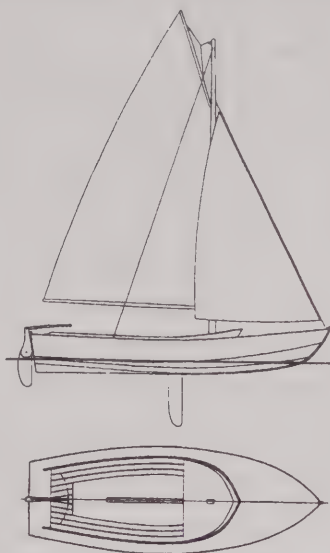
With all of this boatbuilding experience now residing within the Association, I felt that it was time to resurrect the concept of a club boat, but with the modification of intent that it be a boat built and owned by individual members but of a common design for the Association. There are several benefits to this proposal. If several members build to the same design at roughly the same time, there may be savings realized from being able to buy materials in larger quantities. As the number of boats built increases, the accrued knowledge of the construction process within the membership will grow, enabling neophytes to draw upon the specific experience of those who have already built their boat. Finally, if several boats are completed, SWBANS will be able to have its own class of races at the annual Mahone Bay Wooden Boat Festival.

This last aspect I think should have prime emphasis; if SWBANS is a regionally based organization, shouldn't they be visibly

Designing the "Swabbie"

By Michael Mason

(Reprinted from the Small Wooden Boat Association of Nova Scotia Newsletter)



promoting designs done by and for Nova Scotians? I think so, and hope that our friends and members from other regions will help to propagate the club boat by building one in their home area. Apparently, the iron was sufficiently warm for the strike, because when I proposed this modified idea for a club boat to the executive of SWBANS in the fall of 2001, the idea was quickly placed on the agenda of the next meeting where it happily received warm support by the members.

I was then faced with the problem of defining the parameters of the boat to be designed. How long should it be? How wide? Cabin? Full keel or centreboard? There was also the fundamental question of whether to create a design that I felt would be the proper boat for the memberships' use, or to solicit the organization to specify the boat? It was

pretty easy to see that if it was to be a club boat, the club should have some say in what it was to be, and the easiest way to get their input was to create a questionnaire for them to individually specify what was the "right" boat. Everybody gets a chance to select their ideal boat, and in true democratic form, the majority would win.

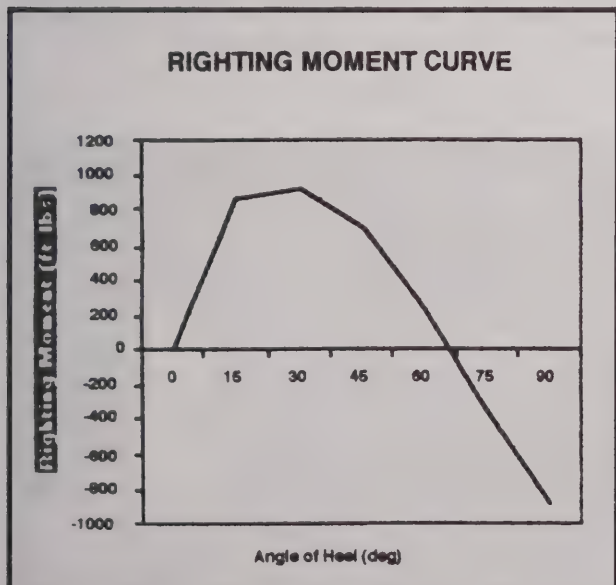
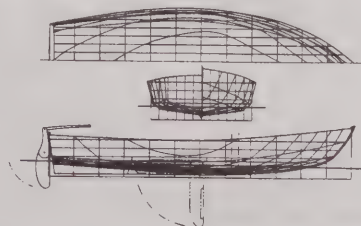
I happily received many responses to the questionnaires. I must admit that I was somewhat surprised at the general trend of the replies; I had expected a majority of you would prefer a fuller, more voluminous hull capable of having a small cuddy with vee berth and port a potty, but apparently most of you just want to go fast and to hell

with creature comforts! I guess that this proves that if one presumes to know what the public wants, one is bound to be shown as wrong. No matter; the client had spoken, so it is my job to create the boat that the client wants.

I felt that it was important that the boat have features or characteristics that were indicative of its origins. To that end I drew the bow profile and sheer to be reminiscent of the beautiful one design club boat by Bill Roue, the Bluenose Class sloop. To make the boat easy to build, as requested by the majority of the survey responders, I decided upon a double chine, stitch and tape plywood hull. A roomy, deep cockpit is incorporated to enable several friends to join in on the fun of a day on the water, as well as to provide enough room to stretch out in a sleeping bag for an occasional overnight stay at a quiet mooring. Wide side decks with sweeping washboards will provide protection from shipping water when heeled over in a blow, and a substantial foredeck will allow plenty of dry space below to stow a picnic cooler and camping gear. For propulsion, I selected a high peaked gaff sloop rig for its ease of construction and salty, traditional looks. With these specifics in hand, I set about drawing the general arrangement that you see here.

I have tentatively named this design the "Swabbie", a play on words with the acronym of the organization she is designed for. Although she is designed for the home builder, she is definitely not a clumsy or slow boat. With her high sail area to displacement ratio, she should move well in light airs and charge forward in stiffer breezes. The ability to put a deep reef in the main to de-power the rig to make things a bit more manageable when the breeze kicks up. With her moderately high length to beam ratio she will be easily driven, and flat buttocks on a broad shallow vee hullform will encourage planing off wind.

I drew the lines of the hull to feature a fine entry, a firm bilge to ensure sail carrying ability, and a bit of rocker in her rabbet to make her nimble when tacking. She has moderate initial stability, making her feel a bit tender when sitting upright, but as you can see from her righting moment curve, she stiffens up considerably as she approaches 15 degrees of heel, where she will benefit most from the planing effects of her broad, flat buttocks. She will be able to take a heel of over 60 degrees before she is at risk of downflooding, a situation that one hopes the prudent sailor will not knowingly allow to happen. Flotation foam fixed to the underside of the side decks, in the lazarette, and under the foredeck will provide positive buoyancy should she happen to take a spill. With a few go fast goodies such as a NACA foil centerboard and rudder and a 120% genoa, she should show more than a few boats with "modern" rigs that traditional looks and rigs don't mean slow!



It is finally getting to be cool enough down here for me to want to get out there and feed the mosquitoes. The last time I ran the AC in the shop was November 13, but I haven't had to fire up the heater yet because this little outfit is made out of insulated concrete blocks and it takes about a week for it all to cool down enough to be uncomfortable.

This is a peculiar little structure. We built it in the summer of 1980... did the whole thing ourselves except for driving the concrete truck for the slab. We had been living in an old drafty wood frame farmhouse that came with the property when we bought it in 1963 and all of us were tired of all them gaps between the boards for the wind and the roaches and the mice, so when we built this place we went exactly the opposite.

The new house is so tight that when, in 1982, a terrible storm roared through here and dropped a bunch of trees on the roof, the air pressure inside the attic blew the sheetrock out of the ceiling of the whole house. Though the rafters (rough two by twelves) were strong enough to hold the trees up, they flexed the tin roof enough to do that. Jane and my oldest son, Sam, were in here at the time and they couldn't figure out exactly what to do. Since the sheetrock had been put up after the walls and partitions, there wasn't anything holding it up but the nails and there was no good place to hide from the falling sheets even in closets and the bathroom so they decided just to run around while all that was going on. Fortunately, they ran fast enough to dodge the falling sheetrock. The destruction outside was

A Peculiar Little Structure

By Robb White

unbelievable. We built the house right in a good sized stand of old virgin longleaf pines with a great, big live oak tree hanging over it for shade. Most of the pines broke off and took the top out of the live oak tree and all that was piled on the roof like it was a wood magnet. I had to pay a crew to come in here to clear us out and it took them two days with chainsaws and a skidder to clear the road good enough to get the crane in to take the trees off the roof. The main reason it took so long was that I cut the trees into regular saw logs and it took a lot of monkey work to get them untangled from the mess and skidded off to be loaded onto my log truck.

The whole thing was a big deal project. Not only did we have to put new metal on the roof and new sheetrock on the ceiling of the concrete house but my shop over there in the old drafty house was completely destroyed. I had to dig out my tools with a backhoe. It was a mess.

After we got dug out and cleaned up, I decided to move the shop into the concrete house. Both the boys were in college so we just converted the living room into the new shop, busted out the concrete block partitions where their bedrooms used to be and made us a tiny apartment. We have been living like this ever since.

I think the situation is just about ideal. The shop is adjacent to the kitchen/living room and when I ain't making any dust or loud racket (which I seldom do) I can leave the door open and talk to my wife and grandchildren. About the only problem is that the 22' length of the shop limits me to small boats, which is not a problem to me anyway because I hadn't built a big boat over in the big old shop for a long time. The Rescue Minor is the biggest boat I have built in thirty years and, at 20', that only left me a foot to squeeze by the stem and transom. Because of that, I developed a callous on my belly and never realized exactly how the transom looked until we got the boat outside.

Fortunately, though peculiar looking, it ain't all that ugly. Visitors to my shop always wonder how in hell I get boats out of there. There are two sliding glass doors on one wall that might be a possibility but my 20' planking bench is permanently built all the way across them. Visitors are surprised to find out that we just turn the finished boat up on its side and carry it out the regular, steel, 3' x 6'8" house style door that used to be the front door of the house. They are real surprised to find out that we did the same thing with the Rescue Minor. There was only half an inch clearance all around and it took the whole crew.

The shop is a tight little squeeze and I have to shuffle some of my machinery around in there to set up various operations. Since most of the actual building of the boat is done with hand tools, the table saw, shaper, and the wide belt sander usually stay stuck into the corners, but some of my machines stay where they are all the time. My old metal lathe and milling machine are stationary and so are my bandsaw, edge sander and little thickness planer (the big one is out in the shed run by a one cylinder, handstarted, chest high, twelve horse at 1,200 rpm Nordberg diesel engine... in case you wanted to know).

I have one of those bag style dust extractors (which I should have had instead of cursed vacuum cleaners long ago... they run quiet and suck hard) and a jack leg centrifugal collector made out of a big cardboard drum that I drag to where I need it when I need it. Fortunately, I don't usually need it so it stands in front of the steel door and is so big that it is hard to see what's behind it. That further puzzles the people who worry about how I get the boat out.

My el-cheapo Tiawanese wide belt sander which I use to thickness sand planking and sticks for spars usually sits in front of the fireplace. I might be the only boatbuilder with a Rumford fireplace in the shop... kind of pleasant on a cold, rainy day like right now. Hell, let me get back in there and fire off some of these summer scraps. I'll push the wide belt sander over there where the stern of the Rescue Minor used to be and it can stay there for a while. The next boat will only be 12' long.

But, first, I got to go kill me a deer. I am just about to starve to death. You know a po boy who doesn't eat chickens ain't got no business at the meat market.

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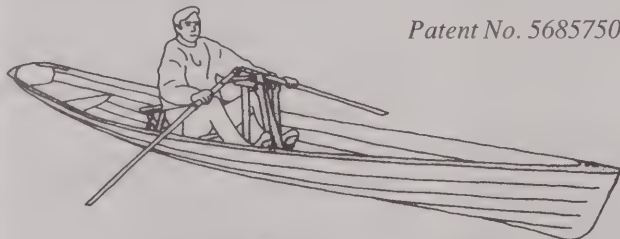
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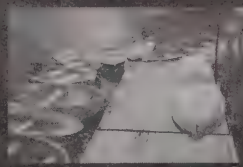


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Saving the Corners

By Mississippi Bob

Quite a few years ago I decided to take the Small Boating Class from the Coast Guard Auxiliary. I also had the same class from the Power Squadron. This was years ago when they both gave the full twelve weeks rather than the new abbreviated "for the insurance company" class. "I had been around the water for quite a while by that time but I felt that I could learn from the classes. I did learn some new stuff and got a refreshed on old things.

Somewhere in the C.G. class they were discussing small boat handling and the lecturer said, "You should always, always catch a bow line first."

I had to fight the urge to stand up and shout, "No, No, No!" The man was almost right but to use the word—"always" made him very, very wrong.

Most of the houseboats in my corner of the world are built with nearly square corners. I have repaired enough rounded off ones to ask why this has to happen. Try to visualize what is happening in Figure 1. You are entering a lock in a houseboat with a tail wind. One boat ahead of you is already tied up and you are moving at a good clip because there are several boats behind you. Your bride catches the bowline like she was taught in the class and guess what happens next.

Congratulations, you have just crunched three corners. They are not as square as they were. As the lady held with all her might the bow swung in towards the wall and the stern swung out. The wind did the rest. Your starboard corner went crunch as some fiber glass began splintering.

See Figure 2. The wind has now got hold of the stern and guess what. The boat has now swung about and the port corner also hits the wall just before your port side hits the boat in front. How about that? Three corners and a ding in your port rail all because you listened to that guy in the class.

I've seen this happen quite a few times. I would often look over the wall to make sure that no one was hurt then I would make some snide remark like, "Hey it's only paint." I wasn't always popular.

Preventing this type of accident is very simple, just catch a stern line first and the wind will be your ally. The boat's forward motion is dying fast but the energy is still there trying to do something and what it does is good. The stern line brings the boat around and it lands nice as can be flat on the wall. You did have your fenders out, right?

I have a simple rule. Check the wind, look at the current if there is any. You might even stop long enough to see which way you drift, then catch a line to check your drift first. You may find that you only need one line if the stay is going to be short.

Another thing that I saw repeatedly was skippers who would drag the stern of their boats for hundreds of feet trying to get clear of the wall. When I gave the signal to leave the lock the boat crew would shove off the wall and the skipper would swing the rudder away from the wall and give the boat some power. Guess what. The stern swings toward the wall. Another crunched corner.

Many boat owners think that a boat behaves like the family car. On your car you turn the wheel and the front end swings the way you point it. Boats behave very differently and many owners haven't learned it yet. Most boats have the rudder in the back. When they get the order to change course the stern swings to the outside of the turn and bump bump down the wall. Add a little onshore wind and I have seen boats go bump bump clean out of the lock, not good for the gelcoat.

There are ways to avoid the situation. Probably the simplest thing to do is to keep the stern line on and even shorten it up as much as you can, turn the rudder towards the wall, hand hold a fender between the wall and the stern corner, and back slowly. If you have twin screws back only on the outboard one.

Look at Figure 3. The bow is swinging out and the stern is nailed tight against the wall. You did remember the fender right? the stern line keeps the boat from sliding down the wall.

Use only as much power as you need to get the boat swinging out and maintain this power till the bow is out 30 40 degrees from the wall. As the bow continues to swing stop the screw and give it a burst forward without changing the rudder angle. Let go of the stern line and you should have the boat going

straight sideways. When the stern is 5' 6' off the wall, center the rudder and leave the area acting like you knew something. Exactly the same thing can be done by holding the bowline and starting forward, first swinging the stern out then backing the bow away from the wall.

I have watched tow boats get away from our lock wall with 1200' of tow using either of these two methods. When you see a towboat with twelve or fifteen empty barges swing the tow away from the wall with a strong wind trying to nail it in you know that the pilot knows his stuff. I often asked myself why any skipper of a 40' houseboat couldn't do the same.

One very important thing is don't forget the fenders. It is best to hand hold them if you have enough crew but in any case don't expect them to be needed in the same place every time you use them. I have seen many fenders set real well for the dock at the home port get snapped off when the gunwale rubbed the wall and the rope holding the fender left it a foot below the gunwale so it didn't even get close to making contact. Look over the situation before you land and set up the fenders accordingly.

Next issue I would like to talk about lines and how the tow boaters use them. We can all learn from those lads.

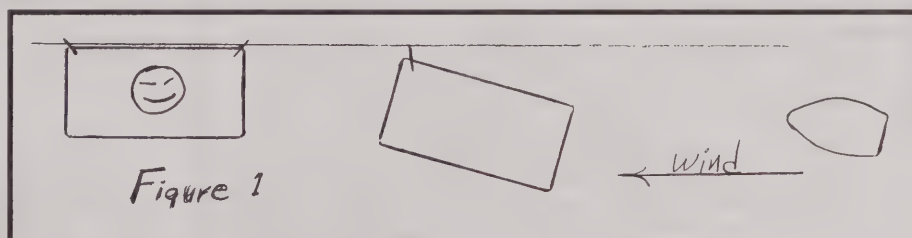


Figure 1

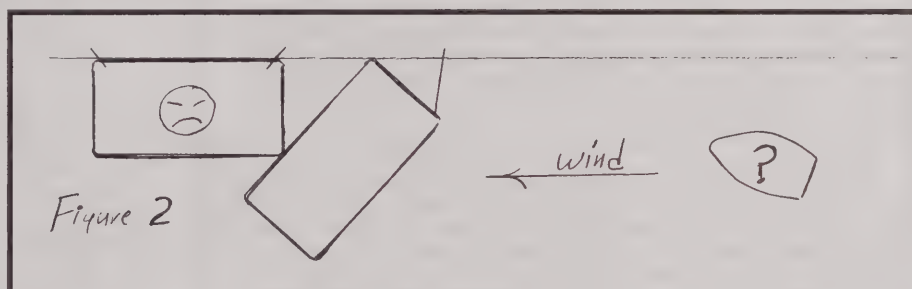


Figure 2

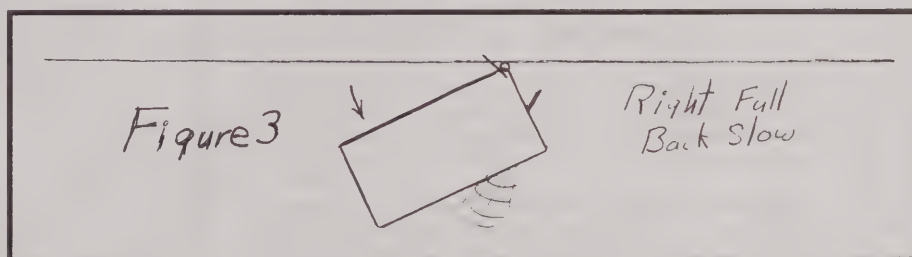


Figure 3

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Bolger on Design

Supplement To Discussion On Design #662 Fiji - Doability

During our recent three part discussion on Fiji (*MAIB* Vol.20 No.10 12) we discussed the assembly sequence for her hull and referred to a diagram which inadvertently did not show up anywhere in that near endless tome. Alas, here is the (temporarily) missing link in the overall coherence of the design. Despite her size of 40' x 27,000+lbs she is indeed conceivable as homebuildable.

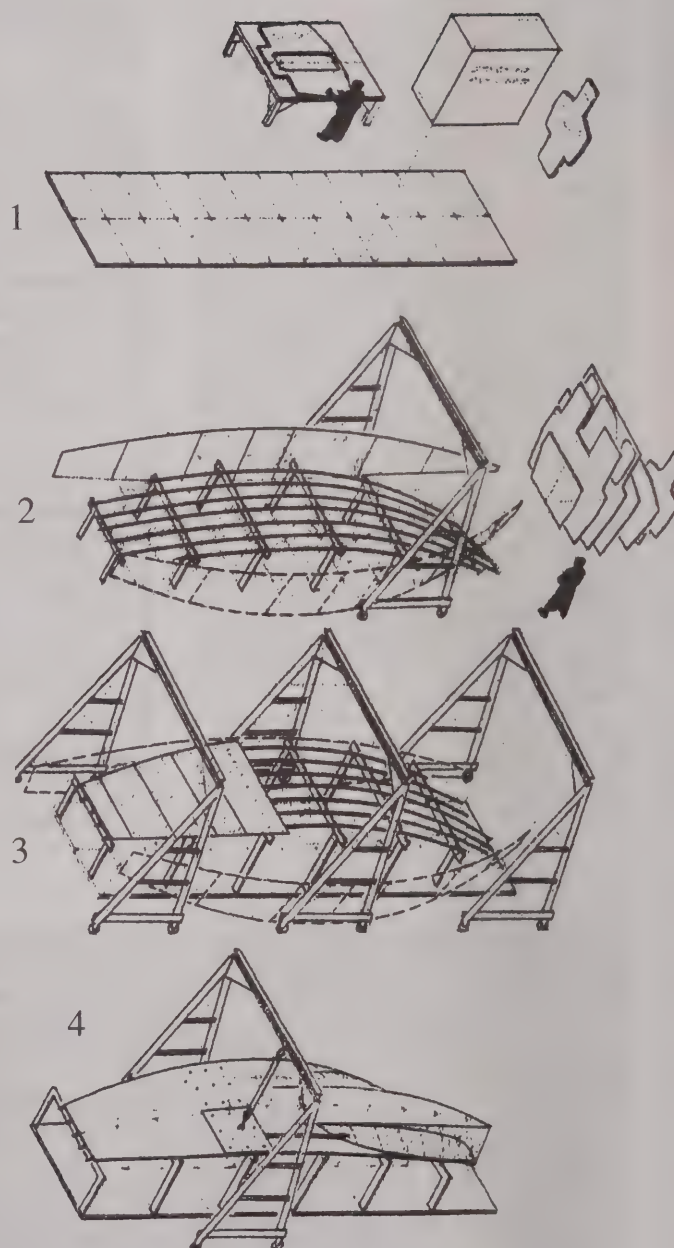
According to various home builder web forum groups, conventional thinking will dogmatically dictate in matter of fact rhetoric that many years and even a decade is to be scheduled for the homebuilder of anything of Fiji's capability. Or a massive 5 digit manhour bill is to be expected from a commercial shop. Much of that type of wisdom is rooted in choosing designs for the dreamboat which reflect design habits that wantonly add weeks of manhours here, and then a month or two there, before you know you're talking years and years with burnout looming and dreams crumbling.

As designers we've certainly sinned on that account as well, but likely much less than many others in the field. We can show a track record of being progressively mindful of this issue. Indeed some call us obsessed with simple shapes, rigs, drive trains, underwater appendages etc. resulting in geometries and appearances sometimes far from the conventional wisdom, often sneered at, frequently not understood, and thus perhaps saddest of all for the state of the design art, without any reflecting on the defensibility of these concepts in light of the given client's wishlist. And on goes the ad campaign drumbeat for another boat of dubious utility; we hear the 2003 models are here...

Designers can sin as a matter of inconsiderate pursuits of fashionable but ultimately less defensible fads, out of ignorance of actual effort required per given attribute, we sure keep learning on that point, and of course, most painful in its consequences for the client and the state of the art of design in general, out of a personal inability to offer anything but conventional black holes of anyone's man power. Thus custom boats are deemed unaffordable. And even if you can pay for that conventional approach to design, you are highly likely to be stuck with a design in Fiji's size class for instance that is still underperforming on most cruising relevant points, as defined in the introduction to Fiji. Except now it cost multiples of the pricetag of the production boats of comparable incapacities, and she'll probably look just like the production jobs, making her still hard to pick out in the marina.

There should be a defensible relationship between the proposed craft's capability and its cost, either in home building hours or commercial rate. And at the center of any home buildable project must be actual doability. As far as we can see, this diagram represents the most doable approach to designing and building a craft of her size and global cruising reach. To repeat the brief run down on her assembly sequence:

1. On an ergonomically correct workbench, taking advantage of top down tool handling and horizontal application of epoxy and even primer and paints, smaller frames and bulkheads are cut and surfaced first to develop efficient working routines on easily replaceable items. These items are stored in reverse order to plausible assembly sequence. If necessary a work surface is prepared to assemble the hull on. Also three wooden gantries on casters are to be assembled with stock hand winches and track to match maximum lifting loads.



2. After assembling a jig curved to respective panels' curvature, these next larger panels, here the 40' long two raised deck and then two hull sides, are assembled full length, surfaced, and using the gantries lifted up and stored on edge in a rack alongside the jig.

3. Adjusted again for its curvature, the massive bottom panel is laminated with final rocker locked in.

4. Bow modifications are applied next, glassed, and final surfacing with priming and painting now.

5. Now the gantries will do the only heavy lifting, turning over the bottom panel. From now on, all assembly is rightside up.

6. & 7. Next, bulkheads, frames and other structural members are erected plumb and true.

8. And again using all three gantries, the full length hull side panels are hung.

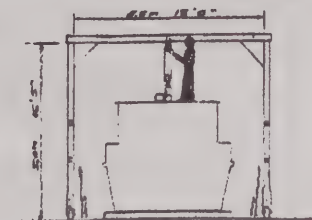
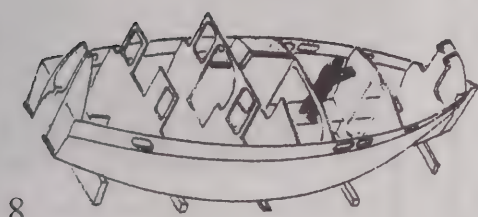
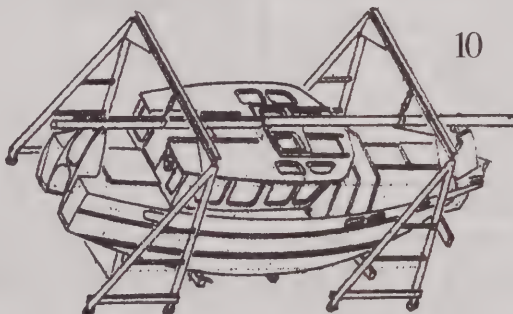
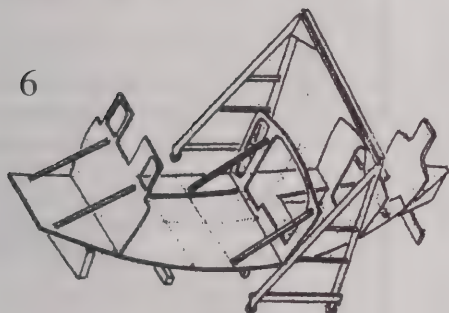
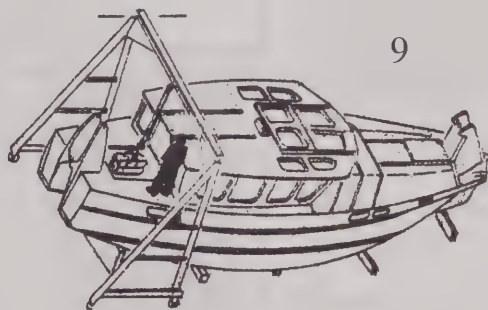
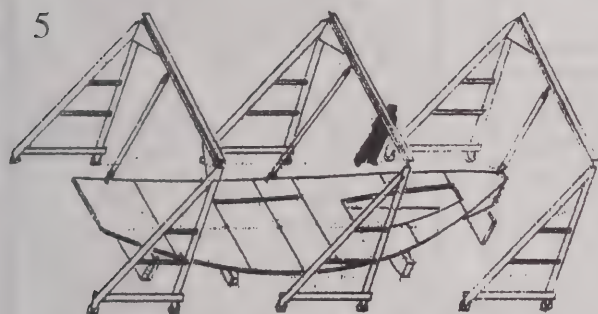
9. Deckhouse has been erected and heavier items such as engine, batteries, tankage, etc. are installed.

10. Finally, lifted into place by the gantries, both masts are located in their tabernacles.

Top down view shows approximate minimum footprint of assembly area. Head on view shows minimum vertical clearance.

With all major and many minor ply pieces pre finished (including glassing) either curved over horses or flat on the floor or workbench, a smooth run less finish is not only possible but within reach without nightmarish weeks spent in sanding purgatory and then lifelong sessions with your allergist.

On the other hand, some folks spend years making "Instant Boats" long term projects... to each their own.




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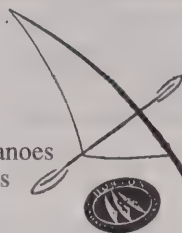
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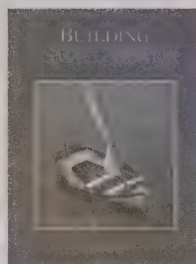
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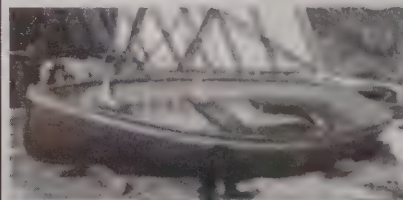
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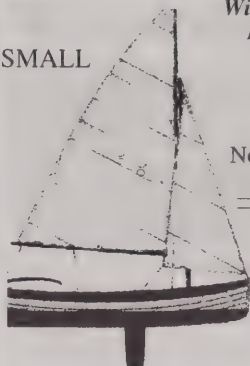
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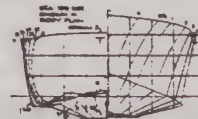
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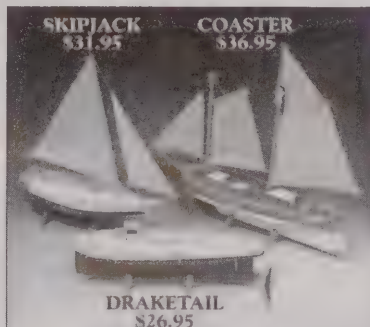


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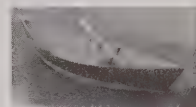
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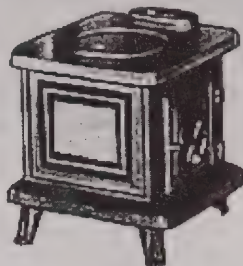
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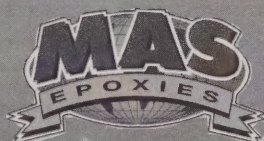
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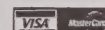
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ROBERT O'NEILL, Brick, NJ, (732) 477-1107. (17P)



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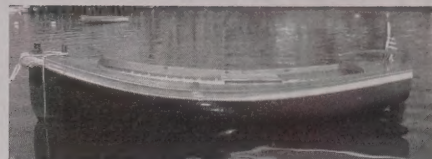
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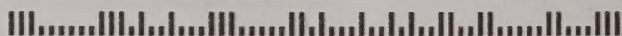
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